A Study of Factors Leading to Growth in Small Firms

An Examination of Factors that Impact on Growth of Small Manufacturing in Least Developed Countries: The Case of Ghana

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ABSTRACT

The focus of this study is to examine the factors that lead to growth in small firms in a Least Developed Country (LDC). The research is based on the manufacturing sector in Ghana. The main objectives of the research are to identify the key variables that lead to small firms' growth and to ascertain the critical barriers that impede growth.

A research model which is developed out of an initial exploratory research and existing literature focuses on how the characteristics of the owner/manager, the characteristics of the firm and the business strategy variables interact to affect growth in employment. In addition factors that are perceived to have constrained the growth of the small firms during the study period are ascertained and discussed.

To properly test the hypotheses developed a face to face interview survey involving 122 owner/managers of small manufacturing firms is conducted. This resulted in a range of variables that allowed for the construction of a comprehensive multivariate model of small firm growth.

A resulting regression model provides about 68 percent of the explanation for the growth of the small firms sampled. It also indicates that the owner/manager characteristics variables offer the most powerful explanation to small firm growth. We find that the owner/manager's growth aspiration is the most influential factor in achieving growth. The other owner/manager characteristics variables that have positive influence on growth are level of education, prior industry experience and entrepreneurial family background. Owner/managers with local experience and/or with other business interests are less likely to achieve faster growth. Foreign owned/managed firms grow faster.

Younger and smaller firms appear to grow faster. While firms with multiple ownerships tend to grow at a slower rate than firms owned and managed by one person.

Business planning, marketing and export have positive and significant impacts on growth. Other business strategies such as innovations and staff training also have direct relationships with growth but not significant.

Some of the main constraining factors to growth are cost of borrowing, lack of access to credit, high cost of inputs, lack of trust within the business community, high bureaucracy, late payments and lack of efficient support system. While the external environment plays important role in small firm growth and development, the behaviours, response and strategies pursued by individual owner/manager are significant factors that determine the rate at which a firm will grow.

DEDICATION

I Dedicate this Thesis to My Parents

Yaw Owusu

And

Akua Amankwah

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I began the journey to DBA, admittedly by under-estimating the volume of work to be completed, the level of scarifies to be made and above all the level of thinking required. To cross these hurdles successfully certainly required some form of assistance.

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Chapter One

Introduction

1.1: The Importance of Small Firm Growth

Much attention over the last two decades has been paid to small firms for a number of reasons. Firstly, small firms are considered as agents of change through innovative activity (Audretsch 2001, Bridge et al 2003) and as a channel for transferring knowledge and technology (Chamanski and Waago 2003). Secondly, small firms provide a major source of employment (Loveman and Sengenberger 1991, Storey 1994, Picot et. al.1994, Barnes and Haskel 2002, Picot and Dupuy 1996, Wannell 1991). Thirdly, Governments and other agencies are with the view that supporting small firms will lead to an improvement in a country's competitive position, through an increase in the effectiveness and the level of innovations in the domestic economy (Chamanski and Waago 2003).

However empirical evidence supports the argument that only a few small businesses do grow and account for the majority of small firms' employment contributions (Storey 1994, Bridge et al 2003, Baldwin and Johnson 2001, Orser et al 2000). For example Neshamba (undated) distinguishes job creation through an increase in number of people who start their own businesses and through the transformation of existing high-growth small businesses into medium-size and even larger firms. He argues that the two are different in terms of factors that lead to their occurrence, the nature of jobs created and the kind of support they require.

Any policy towards supporting small firms should therefore not aim at increasing the quantity of these firms at the expense of their quality and growth, for it is the high growth firms that promote competitiveness in an economy, which in turn leads to job creation (Chamanski and Waago 2003, Bridge et al 2003).

Growing businesses provide special attraction to other business service providers such as financial institutions as they serve as a reservoir for more business and have high prospects for financial returns (Bridge et al 2003, Smallbone and Wyer 2000).

The high failure rate among small firms makes owner/managers focus much attention on success factors leading to an increase in research in this area (Smallbone and Wyer 2000). Growth can be seen as a sign of success; however it can equally present difficulties for managers. Additionally growth is affected by a large number of environmental and organizational factors, therefore an increase in knowledge and understanding of the processes are required for an effective development of public support policies as well as assisting managers as to how to handle growth issues.

The conventional economic theory has long held the position that a firm size is positively correlated with growth by reason of economics of scale and scope. That is to say large firms have advantages over their small counterparts and grow faster (Barlett and Bukvic 2003). This among many other factors led to the establishment of large centrally controlled firms in many developing nations after independence. However the failure of these firms and even those large private firms in the Western world led to the rethinking of this widely held position.

Some researchers have confirmed that small firms grow faster than large firms (Hart and Oulton 1996, Evans 1987a). Several explanations have been offered for the faster growth of small firms. Jovanovic (1982) explains this by the fact the small firms enter the market at less than minimum efficient scale and grow over time. Others like Bartlett and Franieevic (1999) rely on the theory of flexibility and adaptability of small firms.

The realization that small firms grow faster than large firms has contributed in shaping the economic policies of many developing nations such as Ghana. This has led to the privatization of many large state controlled firms, as well as increasing direct support for small firms (Aryeetey and Harrigan, 2000). These policies are intended to lead to growth in

small firms and provide the needed job avenues for an ever increasing population in these countries. However in many of these economies, the small firms sector has not grown sufficiently enough to reduce unemployment or fulfill it promise as an engine of growth (Goedhuys and Sleuwaegen, 1999).

Neshamba (undated) argues that growth and transformation of enterprises in Africa are not well understood with very little research undertaken.

The major concern now is to ascertain factors that lead to growth of small firms in Least Developed Countries (LDCs) which may differ from those explained by researchers using data from advance economies. While some small firms may have the internal capacity to grow, they are prevented by achieving the desire growth due to constraints imposed by the external environment. Hence there is the need to ascertain the extent to which the external environment impedes growth.

1.2: The Research Objectives and Questions

The main purpose of this research is to develop an explanatory framework that leads to a better understanding of small firm growth in LDCs with particular focus on: (a) the role that the owner/manager plays to effect growth, (b) the impact of organizational characteristics on growth (c) the most effective business strategies that lead to growth and (d) the perceptions of the owner/managers on factors that constrain growth.

In order to achieve the above set objectives, the following main and sub-research questions are addressed:

Main Research Question: What are the significant factors that influence growth of small firms in LDCs?

Sub-Research Question 1: Which characteristics of the owner/manager have a significant influence on small firm growth in LDCs?

Sub-Research Question 2: What are the major characteristics of the firm that impact on small firm growth in LDCs?

Sub-Research Question 3: What kind of business strategies adopted has a significant influence on small firm growth in LDCs?

Sub-Research Question 4: What are the major factors that constrain growth of small firms in LDCs?

1.3: Weaknesses in Existing Research

Small firm growth has been widely studied in developed countries (Wiklund, 1998). However, the same cannot be said of developing countries (Neshamba, undated) especially Ghana. A literature review carried out by Naudé and Havenga (2005) on African entrepreneurship and small business research spanning the years 1963 to 2001 observed a significant growth of research into African entrepreneurship and small business since 1980. They note for example that between 1963 and 1978 only 54 publications or an average of 3.38 per year was produced. However, 466 (89.6 percent) out of the 520 total publications identified related to the period between 1980 and 2001. They report further that 61.2 percent of the publications concerned South Africa, followed by Zimbabwe (5.0 %), Nigeria (3.8 %), Kenya (3.65 %) and Ghana (3.07 %) with 11.92 percent being general. The writers analyzed the publications by topic as shown in Table 1.1 below.

In light of the above findings it can be concluded that research into small firms in general and small firm growth in particular are in their infancy in Africa and possibly in many LDCs.

According to Sleuwaegen and Goedhuys (2002) existing theories on firm growth fail to explain firm dynamics that underlie the observed industrial structures in developing countries. They argue that theories based on developed economies do not sufficiently take into account the impact of poorly developed institutional features and markets in

developing countries. The few research works that have been carried out in developing countries also tend to focus more on factors that hinder growth (Ligthelm, 2004).

Table 1.1: Analysis of African Entrepreneurship and Small Business Research (1963-2001) by Topic.

Topic	No. of Publications	Percentage %
Definitions, Concepts & Methodology	13	2.5
Role of Entrepreneurship in Africa	54	10.4
Characteristics of Africa Entrepreneurship	22	4.2
Determinants, Constraints & Opportunities	73	14.0
Government Support and Policy	33	6.3
Women's Entrepreneurship	30	5.8
Informal Sector	25	4.8
Agriculture and Rural Development	19	3.7
Technology and Innovation	11	2.1
Culture, Networks & Clusters	49	9.4
Management, Education & Skills	74	14.2
Legislation, Institutions & Regulations	16	3.1
Financial Factors, Credit & Information	8	1.5
History	29	5.6
General	64	12.3
Total	**520**	**100**

Source: Naudé and Havenga (2005), page 18.

Attempts made by previous works to explain small firm growth in LDCs can be categorized into two perspectives. The first tends to focus on the difficulties imposed on firms from the external environments including poor institutional frameworks, inadequate infrastructure, high level of corruption, unstable macro-economic situation, and credit constraints (Sleuwaegen and Goedhuys 2002, Goedhuys and Sleuwaegen 1999, Bigsten et al 2000, Teal 1998, Mambula 2002). Other works have only concentrated on the firms'

level dealing with managerial weaknesses, lack of technical abilities, entrepreneurial skills, etc. (Neshamba undated). Table 1.2 below presents some of the small firm growth researches carried out in LDCs.

TABLE 1.2: Firm Growth Research in LDCs

Researcher	Research Objective	Methodology	Country	Sector
Harding et al (2004)	To examine the determinants of growth in output and productivity. Focusing on firm's characteristics.	Survey, Statistical Analysis.	Ghana, Kenya, Tanzania.	Manufacturing: Food Processing, Beverages, Textiles, Garments, Wood Processing, Furniture and Metal Fabrication.
Teal (1998)	To examine how economic reforms adopted between 1983-1991 have resulted in firm growth.	Survey, Statistical Analysis	Ghana	Manufacturing: Food Processing, Beverages, Textiles, Garments, Wood Processing, Furniture and Metal Fabrication
Bigsten et al (2000)	To examine the extent to which firms in Africa are credit constrained.	Survey, Regression Analysis	Ghana, Zimbabwe, Kenya, Cote d'Ivoire, Burundi Cameroon.	Manufacturing
McPherson (1996)	To examine growth determinants focusing on the owner and firm characteristics	Survey Regression Analysis	South Africa, Swaziland, Lesotho, Botswana Zimbabwe	Manufacturing, Construction, Trading, Hotels, Transport, other services
Mambula (2002)	To examine factors that constrain SME growth	Qualitative and Quantitative methods.	Nigeria	

TABLE 1.2 Continued: FIRM GROWTH RESEARCHES IN LDCs

Researcher	Research Objective	Methodology	Country	Sector
Trulsson (2002)	To identify factors that constrain SME growth	Qualitative Focus group discussion	Uganda, Zambia and Zimbabwe	
Harabi (2003)	To examine factors affecting firm growth process focusing on firm characteristics and government policies.	Quantitative, Survey Statistical Analysis	Morocco	Manufacturing, Construction, Services and Commerce
Manbula & Sawyer (2004)	1. Analysis of obstacles that limit small firm growth. 2. Enquiry into the impact of lack of external support.	Mixed methodology. Case Study, Survey, & Descriptive Data (secondary data).	Nigeria.	
Goedhuys and Sleuwaegen (1999)	Analysis of barriers to growth.	Quantitative, Survey Statistical Analysis	Burundi	Manufacturing: Agro-industries, Textiles, Wood working, and Metal working

This research attempts to combine the two perspectives in one broad model that seeks to provide a comprehensive explanation for small firm growth in LDCs. Such an approach as argued by Ibeh (2004) provides an opportunity to re-examine and compare with previous works.

Methodologically, many of these research works tend to use quantitative methods that are aimed at asking 'what' and 'how many' questions to the neglect of 'why' and 'how' questions (Ligthelm 2004, Berry et al 2002). Such approach offers less rich explanations of growth process (Freel 2000), and is not based on objective evaluation of growth determinants (Berry et al 2002).

Gibb (1992) suggests the use of a stepwise "stage" approach that involves an initial exploratory qualitative research aimed at developing an initial insight or understanding into the activities of the small firms to be followed by a quantitative research intended to identify the specific practices of the small firms. Kirby (1995) suggests that each research

stage builds upon what has been learned in previous stage, in making an incremental contribution to the established knowledge base, thus allowing the research to provide an in-depth and focused analysis of small firm activities.

1.4: Delimitations and Scope of the Study

The research covers a section of the manufacturing sector (i.e. plastics and rubber, furniture and wood processing, paper and printing, food processing and metal works). The manufacturing sector remains the dominant sub-sector of the Ghanaian economy by contributing about 60% of the total value of industrial production and as a major source of employment in Ghana (Baah-Nuakoh, 2003). The unit of analysis is the firm with a prime focus on the owner/manager.

Time did not permit the acquisition of longitudinal data for analysis; hence any conclusion made is based on cross sectional data. Other weaknesses that might have the potential of affecting our results and findings have been addressed in chapter eleven.

1.5: Differences in Characteristics- LDCs and Developed Countries (DCs)

There are a variety of characteristics that differentiate the economic, political and social environments as well as the firms' own characteristics in LDCs from those normally found in their developed counterparts. Though there are also some differences in these environments among the LDCs, in Table 1.3 below, we provide some general differences between LDCs and DCs.

Table 1.3: Differences between Small Firm Growth Factors in LDCs and DCs.

Variable	LDCs	DCs
Macro Business Environment	Unstable macro-economic environment. High rate of inflation. High rate of devaluation of local currencies. Poor legal systems. Lack of access to capital. High interest rates. Non-availability of foreign exchange.	High rate of technological changes. Effective tax system. High level of contract enforcement. Low level of inflation. Foreign exchange available on demand.
Micro Business Environment	Less competitive environment. Existence of dual market structures. Lack of access to inputs Inadequate infrastructure. Low demand.	High competitive environment. Existence of related and supporting industries. Availability of skilled labor. High cost of labor. Sophisticated and demanding buyers.
Institutional Factors	High level of corruption. High prevalence rate of informal activities. High level of bureaucracy. Over regulation. Lack of contract enforcement. Weak public institutions.	Availability of effective government support systems. Existence of institutions to ensure fair competition. Existence of high level of rule of law.
Firm Characteristics	Firms located in urban centers tend to grow faster. Most firms are young. Prevalence of single ownership.	Mixed evidence of the effect of location on firm growth. Most firms have reached their maturity. Existence of multiple owners.
Owner Characteristics	Many part-time business owners with full-time state employment. Low level of education. No separation between the owner and the business entity. High unemployment rate pushed many people in self employment.	Full-time private business owners. Professionals and other people with high level of education enter into self employment. Formal rules exist to ensure some level of separation between the individual owner and the business. Many people are positively pulled into self employment.
Business Strategy	Low technological innovations. Less export oriented. Less emphasis on product quality and packaging. Unwillingness to allow external equity participation arising from culture of mistrust.	High technological innovations. More export oriented. High market positioning and product quality.

1.6: The Political Economy of Ghana

Ghana has an area of 239,000 sq. km and is in West Africa. It is surrounded by three former colonies of France and members of the French *Francophone* (i.e. Burkina Faso to the North, Togo at the East, Cote d'Ivoire on the West and the South is the Gulf of Guinea). Ghana was the first African country to gain independence in 1957 from British colonial rule. Its national language is English.

In Appendix 1.1a and 1.1b, key statistical figures are provided to show the position of Ghana in comparison with some other African countries. Previous studies relating to some of these countries will be compared to our findings at a latter stage.

Ghana like many LDCs in general and West African countries in particular has suffered from political instability arising from overthrows of regimes being either constitutional or military. Appendix 1.2 presents a summary of key political events that have taken place since Independence in 1957.

The political instability among other factors led to economic decline over the years. As noted Bates (1981) African political leaders seek to maximize their political interests by undertaking economic policies that will allow them to remain in power. Economic policies are also cut short by one regime to the other leading to no consistency in development agenda.

1.6.1: The Political Economy under Kwame Nkrumah (1957-1966)

At independence in March 1957, Ghana had per capita income of about US$ 300 which was comparable to other middle income countries like South Korea (Leith and Lofchie, 1993). Notwithstanding the lack of industrialization, the economy appeared to be stable and prosperous, as it was the leading producer of cocoa at the time (Aryeetey and Fosu, 2002).

After independence, Ghana embarked on a rapid import-substituting industrialization through the establishment of state enterprises as guided by the declaration of the Development Decade (1960-1970) by the United Nations (UN) (Aryeetey and Harrigan 2000). The political philosophy at the time being socialist inclined, also influenced how the industries were financed and controlled in most cases by the state (Aryeetey and Fosu, 2002, Bhasin and Annim, 2005).

The entrepreneurial class on one hand was considered less capable to play a leading role in the massive industrialization program, and on the other hand a strong entrepreneurial class was seen as a political threat (Aryeetey et al 1994, Aryee et al 1999). However, Akuoko-Frimpong (1990) contends that in the early years of Nkrumah's rule there was no firm commitment to direct state intervention. Akuoko-Frimpong (1990) points out that by 1960 Nkrumah had completely shifted away from the colonial masters (Great Britain), rejected open market economy and had adopted a centrally planned and regulated economy. The state then became the predominant economic agent in Ghana.

The main source of financing the industrialization program was export earnings from cocoa, accounting for over 35 percent of total government revenue between 1957 and 1960 (Jakobeit 1991, Bhasin and Annim 2005). The sharp drop of the world market price of cocoa in 1961 from US$467 to US$91, coupled with production fall from 572,000 tons to little over 400,000 tons in 1965, severely impacted on the nation's ability to continue to fund the industrialization program (Gyimah-Boadi and Jefferies, 2000). Due partly to

mismanagement, these new state-enterprises proved highly unprofitable and became a huge burden on the state finances (Gyimah-Boadi and Jefferies2000, Bhasin and Annim 2005).

The economy experienced a decline in the macro level as shown in Appendix 1.3. The country's external reserve of US$269 million at the end of 1957 was completely depleted and by the end of 1966 has reached negative US$391 million. Inflation which stood at 1.0 percent year end 1957 rose over the period hitting 22.7 percent in 1965 as government budget consistently showed deficits with the exception of 1957 and 1958.

One response of the government was to prohibit repatriation of profits, a policy that scared off foreign investors (Bhasin and Annim, 2005).

1.6.2: The Political Economy 1967-1972

This period marked two political regimes, one military and the other civilian. The deterioration in the economic situation and the fall in living standard during the regime of Nkrumah were said to be the main factors that motivated his overthrow by the National Liberation Council (NLC) in 1966 (Aryeetey and Fosu, 2002). The NLC intended to pursue more open economic policies. Akuoko-Frimpong (1990) argues that the overthrow of Nkrumah marked the starting point of the process of privatization including the promotion of small and medium-size indigenous private businesses.

The NLC introduced policies aimed at stabilizing the macro-economic situation, which included a reduction in domestic investment, tighter control over import licenses and a devaluation of the cedi (Aryeetey and Fosu 2002, Killick 1978). As argued by Aryeetey and Fosu (2002), these economic policies largely achieved their intended objectives, (albeit for a short period). As shown in Appendix 1.4, by 1969 the negative GDP growth rate had been reversed to 1.2 percent. The current account deficit of ¢173 million at the end of 1966 has been reduced to ¢70 million, with inflation hovering around 6.5 percent.

The Busia civilian regime that succeeded the NLC in 1969 pursued the liberalization policies that were started by the latter more vigorously. According to Akuoko-Frimpong (1990), Busia's government adopted a strategy which put stability above growth and a return to private enterprise. The Busia regime while encouraging foreign private investment also ensured the establishment of state/private enterprises and was less determined to set up a state organization to be in competition with a private enterprise. It abolished the import control system and was initially unprepared to implement measures such as tax increase to curtail the high increase in demand for imported goods. There was also a sharp fall in the world market price of cocoa in 1971. The result was that by 1972 the economy had declined to the position it was in 1965 (Aryeetey and Fosu 2002, Gyimah-Boadi and Jefferies 2000).

According to Aryeetey and Fosu (2002), the devaluation of the cedi by 48.6 percent in 1971 and the economic difficulties at the time were used as a pretext for the nation's second military takeover in 1972. It is on record that Acheampong and his junta that overthrew the Busia government started planning since 1970 (Gyimah-Boadi and Jefferies, 2000).

1.6.3: The Acheampong Regime (1972-1978)

Having overthrown a civilian government which was willing to allow democracy to work, the Acheampong regime adopted economic policies that were heavily influenced by political expediency. To justify the military takeover the regime in 1972 reversed the previous devaluation of the value of the cedi upwards by 44 percent (Bhasin and Annim, 2005).

Gyimah-Boadi and Jefferies (2000), note that between 1972-5 Acheampong's government repudiated all foreign debts, expropriated private assets to the state and promulgated an investment decree which put into the hands of Ghanaians the 'commanding heights of the

economy', all to appease the urban class. This scared away foreign investors (Bhasin and Annim, 2005).

After a single increase the producer price of cocoa in 1974, the regime refused any further price increase notwithstanding the continued high price of the commodity on the international market and the high local inflation which by 1977 had reached a record height for the first time of 116.5 percent. By 1977, cocoa export had been reduced from 430,000 tons per annum to 277,000 tons (Mansfield, 1980). The state became the principal employer offering jobs to about 80 percent of the labor force (Bhasin and Annim, 2005) and increased its shares in a number of foreign owned firms to 55 percent (Akuoko-Frimpong, 1990).

Corruption became highly pervasive such that officials who wanted to remain honest came under pressure to take advantage of the rent-seeking avenues of their jobs (Aryee et al 1999, Gyimah-Boadi and Jefferies 2000).

Opposition to Acheampong's rule grew stronger demanding a return to a civilian government, which led to his replacement through a 'palace coup' in July 1978 by his second in command Lt. General Fred Akuffo (Gyimah-Boadi and Jefferies, 2000).

1.6.4: The Akuffo, AFRC and Limann Regimes (1978-81)

The Akuffo regime which lasted less than a year according to Gyimah-Boadi and Jefferies (2000) took two major decisions in the political economy of the country at the time. The regime devalued the cedi by 60 percent and decided to return the country to a multiparty constitutional rule in June 1979. Political prisoners were freed and to curb corruption some of the former regime's members were sacked. However, no legal action was taken against these corrupt officials to the dismay of many Ghanaians (Gyimah-Boadi and Jefferies 2000).

The anger within the military continued to grow until a successful coup was staged on June 4, 1979 that ended the Akuffo's regime. This preceded an earlier failed attempt by Ft. Lt. J.J. Rawlings in May of the same year. He was removed from military cell and became the leader (Chairman) of the 'junta' named Armed Forces Revolutionary Council (AFRC).

The three month rule of the AFRC witnessed one of the bloodiest period within the history of the country with the execution of eight military officers including three former heads of state. The regime equating high commodity prices with 'exploitation' embarked on force sale of stock of imported goods at controlled prices. The supply of foodstuffs from the rural areas virtually came to a halt as soldiers continued to sell these items at their preferred prices (Gyimah-Boadi and Jefferies 2000).

The AFRC handed over power to the PNP government in September 1979 after the latter won the general elections held in June the same year.

According to Gyimah-Boadi and Jefferies (2000), the Limann's PNP government initiated two main economic policies. First, the regime introduced new taxes as a way of increasing government revenue and a reduction of government expenditure. Secondly, efforts were made to attract foreign investments and aids, neither of which the government was successful to obtain. With the government refusal to accept IMF stabilization measures including devaluing the local currency the economic situation of the country continued to see no improvement (see Appendix 1.5). Another military takeover occurred on December 31, 1981.

1.6.5: Rawlings-PNDC Era (1982-1992)

The Rawlings' Provisional National Defence Council (PNDC) that took power from the PNP had two distinct economic policies. Describing the first phase of the regime as 'distributionist-cum-poplist mobilization', Gyimah-Boadi and Jefferies (2000), note that the regime imposed very strict rules on businesses. The PNDC at the time was in favor of

socialism (Boafo-Arthur, 1999). Some people had their assets confiscated under the pretext of hording, overpricing or as 'economic saboteurs' (Asante 2000, Aryee et al 1999). Bank accounts of certain companies and individuals deemed substantial were either frozen or confiscated to the state. Some business owners were physically brutalized, humiliated and stigmatized as 'imperialists' (Aryee et al 1999, Boafo-Arthur 1999) and others were imprisoned. There was also an anti-corruption drive that investigated the wealth of both the private and public persons as to how they acquired their respective assets.

The regime unilaterally cancelled all external debts of Ghana and threatened to nationalize some foreign firms (Gyimah-Boadi and Jefferies, 2000). The regime could however, not implement any serious economic measures to end the continued decline of the economic situation for lack of financial resources until 1983 (Boafo-Arthur, 1999). By the end of 1982 the Ghanaian economy was close to collapse for lack of external support and a drop in both the production output and world price of cocoa.

In 1983, the PNDC changed its political and economic direction by accepting market economic principles dictated by the IMF and the World Bank. This led to the launching of an Economic Recovery Program (ERP) in the same year. The objectives of the ERP can be summarized into five main elements as (1) the realignment of relative prices to foster growth in production and export (2) a shift from direct government intervention towards reliance on market forces (3) the restoration of fiscal and monetary discipline and liberalizing trade and payments regime (4) the rehabilitation of social and economic infrastructure and (5) structural and institutional reforms aimed at increasing efficiency and encouraging growth of savings and investments (Hoefter 2001, Aryeetey and Harrigan 2000, Akuoko-Frimpong 1999). In effect by 1991 the foreign exchange market had been liberalized, price controls had been removed. Imports were liberalized by canceling the import licensing. Exports were liberalized by allowing the retention of foreign exchange

proceeds and reduction of state involvement in the economy through the privatization of certain state enterprises (Gyimah-Boadi and Jefferies, 2000). A new investment code was promulgated with the view of restoring confidence and attracting more private investments (Akuoko-Frimpong, 1999).

Describing the initial results of the ERP as generally positive, Aryee et al (1999) note a reduction in inflation rate from 125 percent in 1983 to 33 percent in 1986 and reaching 10 percent in 1992. The economy started to enjoy a positive GDP growth rate estimated at 5 percent per annum, as a result of an increase in the country's traditional exports of cocoa, gold and timber. Commercial activities recovered mainly due to the trade liberalization policy. Private investment did not however, improve much remaining at about 4 percent of GDP. Overall gross domestic investment rose from about 11 percent to 16 percent which indicated that a major chunk of investment continued to be that of public sector. Negative real interest rates were reversed and the government budget recorded surpluses (Aryeetey and Fosu, 2002).

1.6.6: The Constitutional Rule (1992-2004)

Unlike most other West Africa countries, Ghana has enjoyed political stability since it went into multiparty democracy in 1992. Four general elections have been held peacefully. The first two were won by the National Democratic Congress (NDC), an offshoot of the defunct PNDC, with Flight Lt. J.J. Rawlings as the President on both occasions. Whiles the 2000 and 2004 elections were won by the New Patriotic Party with J.A. Kufour as the president on both occasions.

The macroeconomic performance showed a downward turn after 1991. Hoefter (2001) argues that during the 1992 election campaign the ruling government under Rawlings increased public expenditure to accommodate agitation for higher wages for public sector employees. This fueled inflation (70 percent in 1996), and led to a substantial increase in

national debt and a rise in interest rates. Hoefter (2001) further notes that the same mistake was repeated during the 1996 elections.

The cumulative effect was that GDP growth rate slowed down averaging 4.2 percent for the period 1992 to 1998. Export growth which rose from a record low of 9 percent before 1983 to 11 percent for the period 1985-1989, recorded no growth for the period 1990-1996. Unlike exports, imports growth became substantially positive at 5 percent during the same period (Aryeetey and Fosu, 2002).

By the year 2000, the economic conditions had systematically deteriorated. Budgetary imbalances had become entrenched. Adverse terms of trade had worsened, in addition to delays in aid disbursements. It became a common practice for the central bank to dishonor government cheques. The continued delays in external inflows compelled the government to borrow internally. This raised local interest rate surpassing 50 percent per annum at the end of 1999. Interest on national debt constituted over 40 percent of total recurrent expenditure (CEPA, 2001).

The CEPA (2001) report further notes that the country's external payments position deteriorated sharply in the year 2000 such that international reserves fell below one month of import cover. The NDC government could not survive the 2000 general elections, in the light of rising prices, depreciating exchange rate, high interest rates and declining output. They were therefore voted out of power in favour of the NPP.

The economy during the period 2000-2004 appeared to be responding well to the economic measures implemented by the NPP government in an attempt to reverse the decline experienced up to 2000. Real GDP showed upward trend from 4.2 % in 2001 rose to 4.5 % in 2002 and hitting 5.6 % in 2004. The domestic debt reached its lowest level in several years in 2003, with further fall in 2004. Consequently, interest rates fell to around 25 percent by the end of 2004. The annual inflation rate fell to 15.7 % in 2002; however went up to 26.7 % in 2003, before slipping back to around 14.8 % in 2004. The manufacturing

sector output grew from 3.8 % in 2000 to 4.8 % in 2002, but showed a slight reduction in 2003 to 4.6 %.

The above stated successes notwithstanding, according to Sarpong (2004) the private sector growth continues to be limited by access to finance and high interest rates. There exists a lot more work to be done in the areas of structural and institutional reforms. The privatization of state enterprises had been extremely slow. Institutions continued to be weak. Perception about corruption continued to rise (CDD, 2005).

1.7: Sectoral Analysis

The industrial sector became the most growing sector during the ERP period in Ghana. The sector achieved growth rates of 11.9 % and 17.6 % in the years 1984 and 1988 respectively. The growth rates of the sector had however, fallen to rate such as 1.3 % in 1994. During the period 1989 to 1999 an average growth rate of 4.4 % was recorded (Baah-Nuakoh, 2003).

The manufacturing sub-sector remains the dominant sub-sector within the industrial sector, contributing about 60% of the total value of industrial production (Baah-Nuakoh, 2003). Though the sector accounts for only 9 % of GDP (see Appendix 1.1a), it is the highest contributor of private sector employment (Statistical Service, 2001). For example in 1982 the sector's share of the private sector employment was 31 % and went up to 54 % in 1991. Appendix 1.8 provides the index of the manufacturing production for the period 1995 to 2001 with 1977 as the base year. The metal sub-sector recorded the highest growth rate for the period, followed by the food processing sub-sector. The paper and printing sub-sector was one of the worst performing during the period.

The metal sub-sector has a strategic importance to the industrial sector and the economy of Ghana as a whole through its forward linkages with the other sub-sectors especially the

construction sub-sector (CEPA, 1999). The sector also has a high export potential within the West Africa sub-region.

The food processing sub-sector has a very strategic role to play in the economic development and employment generation in the country. Considering the fact the agriculture sub-sector accounts for about 34% of GDP (see Appendix 1.1a), the growth of the food processing sub-sector will have a relatively large impact on the economic growth of the country. It is common to see in most markets in Ghana, a large proportion of food stuffs that goes rotten. Baah-Nuakoh and Tutu (2003), reports that the food processing sub-sector imports about 49% of its raw material requirements due to lack of quality, unreliable supply and high prices of the local raw materials.

Ghana had been supplying Europe with timber in log form since 1833. This continued until 1945, when value was added to the wood export through pit-sawing. In the 1950s and 60s, exports of sawn lumber saw a high increase, with the inclusion of veneer sheets and plywood. The high rate of deforestation led to the banning of round log export in 1995. Following the ban, the wood industry has progressively moved towards value-added production, which has led to an increase in productivity between 35-50% (GIPC, undated). The growth of the wood sector has a direct and positive impact on the building industry (CEPA, 1999). The furniture and wood sub-sector is characterized by a few companies numbering about 20 accounting for about 66% and 90% of exports value and volume respectively (Bank of Ghana, 2004).

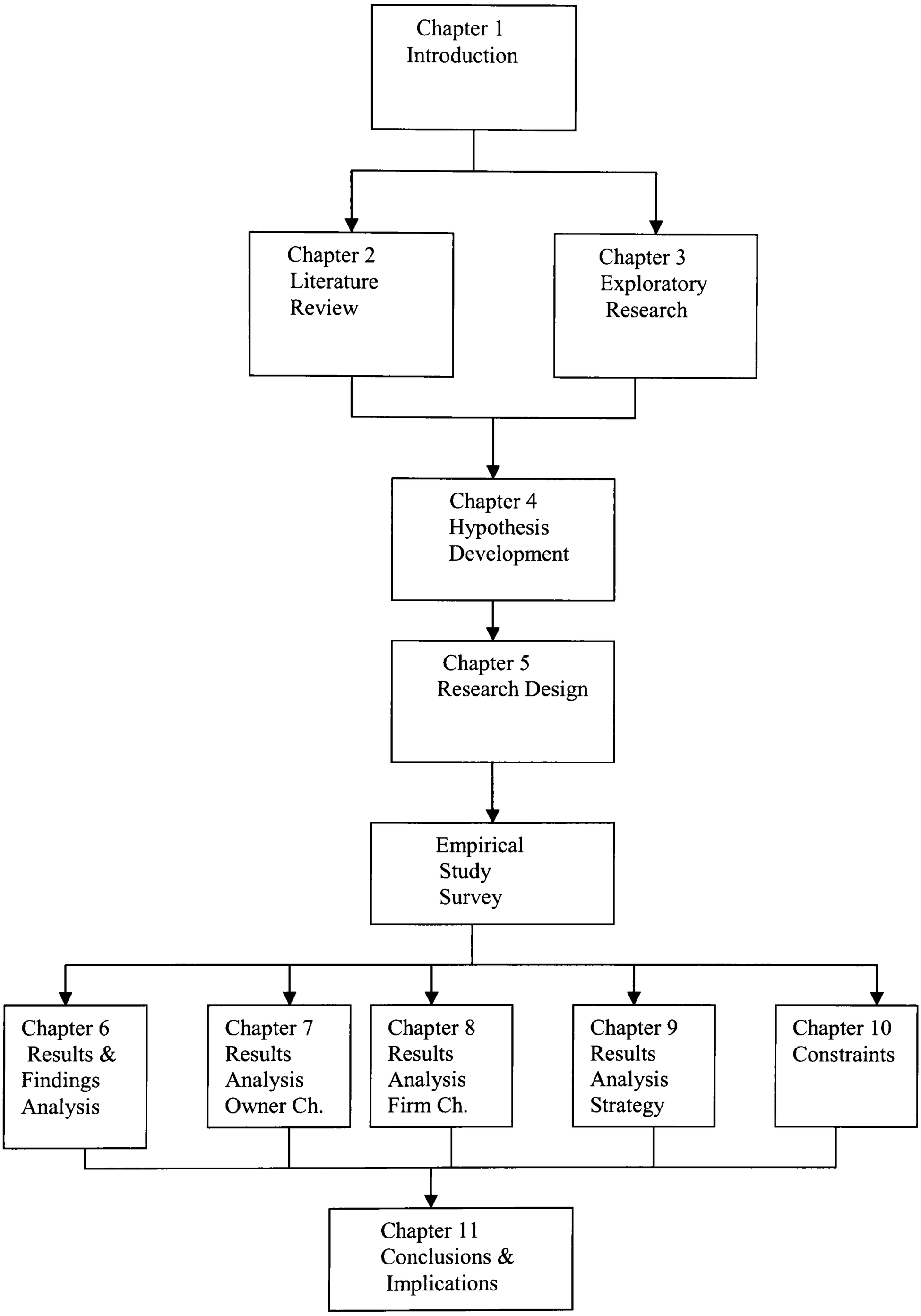
The paper and printing sub-sector is one of the least growing sub-sectors. It mainly produces for the local market and relies heavily on government related businesses.

1.8: Structure of the Thesis

Figure 1.1 below shows graphical overview of the structure of the thesis. Chapter 1 provides among other things the introduction, justification of the research and the political

economy of Ghana. Chapter 2 looks at existing literature on small firm growth in both developed and developing countries. Chapter 3 deals with the exploratory qualitative research which together with chapter 2 lead to the development of hypothesis in chapter 4. Chapter 5 discusses the research design and methodology used in the empirical research and the reason for the choice of methods. Chapters 6-10 cover the empirical part of the research. The thesis ends with implications and policy recommendation in chapter 11.

FIGURE 1.1: Structure of Thesis



Chapter Two

Small Firm Growth Theories

2.1: Introduction

In the recent past a number of researchers and organizational theorists have written a lot on small business growth (Barkham et al 1996, Bridge et al 2003, Smallbone and Wyer 2000, Wiklund 1998, Smallbone et al 1995, Manbula and Sawyer 2004, Kraemer and Venkataraman 1994, Littunen 2001, Perren 1999, Hart and McGuinness 2003, Watson et al 1998, Andersson 2003, O'Gorman 2001). There is however, no single theory that is sufficient enough to explain small firm growth (Gibb and Davis 1990, Bridge et al 2003, Storey 1994, Wiklund 1998, Pistrui 2001, Andersson 2003, Littunen 2001, Smallbone et al 1993). This can be explained by the variety of different factors and the extent to which the factors interact with each other (Smallbone and Wyer 2000, Kirby and Watson 2003).

Ardishvili et al (1998) for example grouped growth theories into (a) factors of growth studies and (b) growth process studies. The former looks for explanations as to why firms grow, by treating growth as a dependent variable to be explained by independent variables. The prime interest of factors of growth studies is on what brings growth to the firm (Davidsson and Wiklund, 2000). On the other hand growth process studies look into changes that take place in the firm resulting from growth, with much emphasis on what growth brings to the firm rather than what brings growth to the firm.

Gibb and Davies (1990) classified small firm growth studies into four major approaches as follows:

(a) the impact of the entrepreneur's personal characteristics;

(b) the strategic factors affecting the firm's growth;

(c) the sectoral and broader market-led approaches and;

(d) the organizational development approaches.

Storey (1994) also developed a framework that incorporated three major different factors to explain small firm growth, which are; the characteristics of the entrepreneur, the characteristics of the firm, and management strategy associated with growth. These three main factors are to be combined appropriately in order for growth to be achieved (Storey, 1994).

Table 2.1: The Determinants of Growth in Small Firms

Owner/Manager	**The Firm**	**Strategy**
Motivation	Age	Planning
Education	Sector	External Finance
Experience (management, prior business, and sector).	Location	Product Development
Number of Founders	Size	Marketing
Age	Ownership	Management Recruitment & Training
Gender	Legal Form	State Support
Family History		Competition
		Exporting
		Technological Sophistication

Source: Storey (1994). Page 123

Davidsson and Wiklund (2000), reviewing previous works categorized growth studies based on their underlying assumptions into a number of theoretical perspectives that fall into either of the factor or process categories identified by Ardishvili et al (1998). The theoretical perspectives being; the resources based perspective, the motivation perspective, the strategic adaptation perspective, and the configuration perspective.

They further argue that the first three perspectives are linked to the factor studies and configuration perspective linked to the process studies.

Wiklund (1998) finds that the theoretical constructs of strategy, resources, motivation and environment cover the vast majority of variables in the study of firm growth. Wiklund (1998) argues that the introduction of these theoretical constructs, allow for classification

and more meaningful comparison of studies to be carried out than to assess individual variables. Wiklund (1998) further notes that relatively few studies utilize variables relating to all the theoretical constructs jointly, though all the four constructs are important in building growth theories.

Table 2.2: Small Firm Growth Models

Researcher	**Approach**
Gibb & Davies (1990)	1.Personality Approach 2.Business Management Approach 3.Sectoral & Broader Market-led Approach 4.Organizational Development Approach
Storey (1994)	1.Characteristics of the Entrepreneur 2.Characteristics of the firm 3. Types of Strategy associated with growth.
Littunen, (2001)	1.Characteristics of the Entrepreneur 2. External factors contributing to firm establishment. 3. Firm's location 3. Strategic choices of the firm 4. Characteristics of products 5. The market.
Perren, (1999)	16 independent factors , interacting with 4 intervening Growth drivers to cause small firm growth.
Watson et al (1998)	1. Internal Environment a. Characteristics of Founder b. Characteristics of the business 2. External Environment a. The Business Infrastructure b. The Business Customers
Andersson, (2003).	1. The Entrepreneur 2. The Firm 3. The Sector 4. The External Environment (e.g. National Cultures, networks)
O'Gorman, (2001)	1. Strategic Choice 2. Industry Structure
Chamanski and Waago, (2003)	1. External Factors - a. Networking - b. Organizational Environment 2. Internal Factors - a. Technology and Business Strategies - b. Management Team This model also shows the interdependency among explanatory factors.
Ennis, (1999)	1. Stages of growth models 2. Economic growth models 3. Organizational Development Models.

Davidsson and Wiklund (2000) framework has an additional advantage of recognizing the interdependency among the various explanatory variables. Basing their argument on theoretical and empirical evidence, Chmanski and Waago (2003) advocate strongly for small firm growth models to consider indirect effects of variables.

In Table 2.2 above we provide some of the growth models that have been used by small firm growth researchers. The subsequent sections discuss the details of the life cycle stage model, owner/manager characteristics, firm characteristics, management strategy and the external environmental factors. We limit our discussion to these models as they are perceived to be the most popular (Smallbone and Wyer 2000, Barkham et al 1996, Storey 1994, Chmanski and Waago 2003) and are the most likely to impact on our own model to be developed which will be relevant to LDCs.

2.2: Life Cycle Stage Model

The Life Cycle Stage Model (LCSM) is regarded as an organizational approach that puts emphasis on the development sequence of a firm as it passes through a series of stages at different points (Gibb and Davies 1990, Smallbone and Wyer 2000). LCSM has been developed by many researchers with various names given to it such as growth stages and development stages (Davidsson and Wiklund 2000, Hanks et al 1993, Kiriri 2003). Churchill and Lewis (1983) developed a five-stage growth model, which considers each developmental stage in terms of five key management variables that consisted of managerial style, organizational structure, formality of systems, organizational objectives, and level of involvement of the owner.

Hanks et al (1993) describe the LCSM as a configuration of variables related to organizational context and structure. Wiklund (1998) explains that, in the LCSM the firm grows in distinct evolutionary phases, each phase followed by a revolutionary

transformation into the next phase. Wiklund (1998) argues that as growth stages are interrupted by volatile crises to cause discontinuous growth pattern, the need for adopting a specific configuration (involving relationships among environment, structure, and strategy) arises. As the firm continuous to grow within a particular growth stage, the present configuration becomes less suitable and inappropriate requiring for further and further transformations to suit the growth process. The failure to solve the key strategic problem of each stage can prevent the firm from experiencing further growth (O'Gorman, 2001).

Davidsson and Wiklund (2000) conclude that the model is mainly concerned with the need for change that growth imposes on the firm, and how growth impacts on the other characteristics of the firm such as organizational structure and strategy.

Understanding the stages of development in which a firm operates allows entrepreneurs to see different problems that their firms face, the model is therefore seen as an important diagnostic tool for analyzing a firm's present position and planning for the next growth stage (Kiriri 2003, Smallbone and Wyer 2003). Having understood the issues, challenges and the problems that the firm faces at each stage, plans and strategies are reviewed to prepare for the future (Churchill and Lewis 1983).

The model however, faces several criticisms. By focusing on life cycle effect (i.e. younger small firms grow faster than older small firms) for explanation of growth, leads to the removal of the human elements and therefore ignoring to address the key questions of entrepreneurial characteristics and motivations and how they may be translated into business strategy (Barkham et al, 1996). The model also assumes that growth is the main motive of all entrepreneurs, however not all entrepreneurs have growth as an objective (Kiriri 2003).

The assumption that growth has to follow a particular pattern from pre-start to decline has also been questioned by researchers. That a large portion of small firms ceases to trade fairly early in their lifetime, and never have the chance to progress beyond the first stage of

the model and others too though continue to exist are unable to move to the next stage (Storey 1994, Wiklund 1998, O'Gorman 2001). Many also fail to allow for alternative growth paths, (e.g. skipping stages or progressing through stages in a different order to that specified in the model) O'Gorman (2001). Bridge et al (2003) referring to non-growth small businesses as static argue that such firms do not expand for reasons including the desired life style of the owner/manager, the limits of the owner/manager's management capability, or societal consideration not to grow the business. Wiklund (1998) argues that small firm growth is not an effect of a natural law, but is highly dependant on the actions of the owner manager.

The stage model has also been criticized as being more descriptive rather than predicative, and provides little understanding as to why those characteristics do arise (Kazanjian 1984, Smallbone and Wyer 2003). The model is less suitable to be used in studies where small firms that grow significantly and pass through different developmental stages are to be compared to others that do not grow, as in practice a firm's development path can be associated with a number of stages, rather than being determined by the model (Wiklund 1998, Smallbone and Wyer 2003). The model is only concerned with internal factors with no relationship with the firm's external environment such as the role of the industry, technology and other situational variables (O'Farrell and Hitchens 1988, O'Gorman 2001). Finally the model does not take into account that growth from one stage to the other may not occur due to barriers to growth (Cambridge Small Business Research Centre 1992, Churchill and Lewis 1983, O'Gorman 2001).

2.3.0: The Owner/Manager Characteristics

The influence and characteristics of the owner/manager is considered as major distinguishing factor between small and large firms (Smallbone and Wyer 2003, Holmes and Gibson 2001, Storey 1994, Stokes 2000, Wiklund et al 2003).

Holmes and Gibson (2001) argue that to properly understand the existence and operation of small firms, it is essential to understand factors that motivate the individual small business owner. Andersson (2003) argues that the entrepreneurs' characteristics are crucial to the understanding of the different firm's growth patterns for the reason that the individual owner/manager interprets the firm's resources and environments as well as formulating the firm's visions and plans.

Hill and McGowan (1999) also believe that any enterprise will be entrepreneurial only because its management is consistently so, and that the enterprise in terms of its character and culture reflects the individual personality and behavior of its management.

The fact that there exist different types of entrepreneurs with different traits, motivation and behaviors can impact differently on a firm's growth process (Holmes and Gibson 2001, Chell et al 1991, Bridge et al 2003). In view of the above one of the approaches that has been embraced in the analysis of small firm growth is the 'personality dominated' approach (Gibb and Davis 1990, Barkharm et al 1996, Storey 1994). The entrepreneur's motivation and the other characteristics relating to small firm growth are also discussed below.

2.3.1: The Owner/Manager Motivation:

Motivation theories which are aimed at explaining why an individual chooses to act in a certain direction are seen to provide better basis for understanding entrepreneurial behavior and performance than personality or ability theories (Wiklund et al 1997). Personality theories seek to explain why an individual has to act in a certain way, on the other hand ability theories explain performance in a very specific tasks (e.g. academic achievement), Wiklund et al (1997).

Wiklund et al (1997) report that studies that have researched into the link between motivation and firm growth have found motivator to be a major predictor of actual growth

(Wiklund 1998), and that motivation is not solely based on financial expectations, therefore suggesting that motivational differences may be an explanation as to why there are such large differences in small firm outcomes.

Smallbone and Wyer (2003) report that, whilst empirical evidence suggests that growth orientation does not necessary lead to actual growth, one of the characteristics which distinguishes high growth firms from other firms is the commitment of the owner to expand the business. Motivation of the owner is seen as a very important element in small firm growth process however it changes over time as the business develops and events external and internal to the business occur (Bridge et al 2003).

Bridge et al (2003) divide owners' motivation into three broad categories:

(a) *Lifestyle*, that refers to businesses run by individual not only to facilitate, but as part of, the lifestyle that the individual wants to have (e.g. art or craft businesses where the owner lives to practise the trade rather than practicing the trade in order to live).

(b) *Comfort-zone,* refers to businesses that provide the owners with sufficient returns for the level of comfort required by the owner, and unlike the life style, in case of the comfort-zone businesses, the basis of the business is less important than the level of benefit it can provide in return for a reasonable amount of effort. On reaching the comfort-zone there is no or less motivation to grow the business.

(c) *Growth,* refers to businesses that the owner wishes to manage with a view of maximizing the potential of the business for now and the future.

For many entrepreneurs growth is not seen as an objective (Bridge et al 2003, Holmes and Gibson 2001, Wiklund 1998, Storey 1994, Chamanski and Waago 2003). Bridge et al (2003) argue that even those businesses that seek growth, a large number of them appear to seek moderate or limited growth, and as they reach the comfort-zone perceived cost of further growth considered to be high, will tend to dominate over any material or psychological gains that could arise from further growth. This argument is supported by

Smallbone and Wyer (2000) when they stated that, the likelihood for the decline of the owner's motivation for growth exists once the owner achieves a certain satisfactory level of income from the business and or their personal/family circumstances change (e.g. as they grow older).

Roper (1999) provides empirical evidence showing the non-existence of a direct link between small firms' growth and profitability. Small firms can therefore trade-off between further growth and profitability, for example within a profit maximization small firm, the owner can decide to maintain business size small and profits high (Schmitt-Degenhardt et al, 2002).

Many small firms also choose a business strategy aim at occupying a local or regional market niche and may not be interested in further growth as long this objective is achieve and is under no threat. Growth beyond the chosen local market will call for complete shift in strategy, and fundamental re-organization of the firm's structure in terms of production, marketing, logistics (Schmitt-Degenhardt et al, 2002). High growth is seen by many entrepreneurs as risky (Storey, 1994) and could be a source of goal conflicts as growth could result in change that run counter to the initial goals of the owner/manager (Davidson 1989, Wiklund 1998). Andersson (2003) reports that to create growth it is important that the owner/manager should have growth objective.

Holmes and Zimmer (1994) also state that the study of entrepreneurs' motivation perspective can provide a context for expert advice. That within the small business due to marginalization factors either; the owner will not seek advice, or at least will not respond positively to advice directed to high growth strategies.

The initial motives of the entrepreneur for starting a firm have been examined with some findings establishing a relationship with subsequent growth of the firm (Littunen 2001, Davidsson 1989). Motives for starting a business can be grouped into two, i.e. positive-pull factors and push factors. The positive ideas are those with specific knowledge of a market

opportunity and attracted in line with conventional economic theory, whiles the pull factors are considered to be more psychological in nature, such as the desire to work for oneself (Littunen 2001, Davidsson 1989). The push factors relate to factors compelling one to establish his/her own firm such as dissatisfaction with present work, or fear of unemployment (Littunen 2001). Davidsson (1989) concludes for example that the pull factors like the desire to experience a challenge or to be independent are positively related to firm growth.

It is however, argued that motivation in itself does not lead to growth unless action is taken, and that strategic choice has been found to provide the connection between motivation and growth (Wiklund, 1998).

2.3.2: Other Owner/Manager Characteristics

Though owner's motivation is considered as a factor that leads to growth, it by no means a guarantor of growth, as such growth model that focuses on the individual entrepreneur as key to growth process must take into account aspects of the individual other than motivation (e.g. traits, behavior and resources) (Bridge et al 2003, Olson and Bokor 1995). These factors do influence the entrepreneur's ability to achieve growth, and the wish to do so (Bridge et al 2003). Sexton and Bowman (1991) argue that growth is a function of the owner/manager's personal abilities, as both the process to achieve and manage growth requires extensive skill and knowledge. Wiklund (2001) concludes that, though growth intentions are positively related to growth, to achieve intended growth is dependent on factors like level of education, experience of the manager, and the environmental dynamism within which the business operates. General human capital in respect of education has been found to lead to high growth rate, there is no evidence, however, to support the theory that, general work experience leads to high growth (Wiklund 2001). On the other specific human capital that are direct to the operating of small businesses such as

start-up experience, management experience, and working experience in rapidly growing organizations, are considered to provide some explanation for small firm growth (Wiklund 2001, Olson and Bokor 1995).

Storey (1994) provides fifteen characteristics of the entrepreneur that affect small firm growth including motivation (motivation was in respect of establishing the business and not in relation of subsequent growth). Education and prior managerial experience, and age besides motivation were found to be positively and moderately to significantly relate to higher growth.

Barkharm et al (1996) confirm the view, that the characteristics of individuals do play an important role in the performance of small firms. The factors that they found to be significantly associated with faster growth include:

(a) *Age*- younger owner-managers tended to have faster growing firms.

(b) *Shared ownership*-the presence and influence of other owners lead to higher growth.

(c) *Multi*-ownership- owner-managers with several (related or unrelated) businesses tend to have faster growing firms.

(d) *Members of a professional organization*-tend to have high growth firms.

Some of these findings are supported by other small firm researchers, for example Bridge et al (2003) state that there is a limit to how enterprising an individual entrepreneur could be. They therefore believe that a firm formed and managed by group of enterprising persons are more likely to perform better than a single owner/managed firm.

The willingness to allow external equity participation by entrepreneurs as a source of financing that limits finance barrier to growth are said to be positively related to growth (Bridge et al, 2003). They argue further that, alternative sources of financing small firms are usually much more expensive (e.g. debt increases gearing), therefore the willingness of

the entrepreneur to share ownership and decision making is seen to be key ingredient for growth.

Another characteristic of entrepreneurs worth discussing is what is referred to as portfolio ownership (Scott and Rosa, 1997), that an entrepreneur could be involved in more than one business. It is argued that portfolio entrepreneurs are more likely to be associated with growth-oriented firms as it is a sign of entrepreneurial flair (Smallbone and Wyer 2000, Bridge et al 2003). Portfolio entrepreneurship tend also to reduce risk as well as providing root for engaging in growth specially in industries where economies of scale is achievable at relatively lower level of output (Smallbone and Wyer, 2000). However, Bridge et al (2003) argue that the excitement and the fulfillment for portfolio entrepreneurs may be in creating new firms, but not ensuring the continued existence and growth of whatever they create.

2.4: The Characteristics of the Firm

The characteristics of the firm itself have been empirically found to influence small firm growth (Stokes 1998, Storey 1994, Barkham et al 1996, McPherson 1994, Smallbone and Wyer 2000, Bridge et al 2003, Hart and McGuiness 2003). Storey (1994) reviewed small firm growth and recommended the inclusion of six factors that reflect the firm's internal characteristics (see Table 2.1).

With regard to the relationship between firm's age and growth, Storey (1994) concludes that younger firms grow faster than older firms in the UK and USA. More recently other researchers have come to similar conclusion using data from else where, Almus and Nerlinger (1999) examined high-technology firms in Germany, Glancey (1998) reviewed small manufacturing firms in Scotland, Wijewardena and Tibbits (1999) examined firms in Australia, and Davidsson et al (2002) using data from Sweden. Storey (1994) contends that the finding can be explained by the fact that new firms need to grow quickly to achieve

minimum efficient scale and then stabilizes due to factors including lack of motivation of the owner/manager to continue to expand the business. Smallbone and North (1996) on the other hand contend that high growth can also be achieved in mature firms. Smallbone and Wyer (2000) conclude that, growth in small firms is rarely continuous and sustained process, such that the age of a firm is not an adequate measure of its growth rate.

The impact of sectoral differences on small firm growth indicates significant different growth rates (Storey 1994, Andersson 2003, Davidsson et al 2002, Stokes 1998, Bridge et al 2003). Fast-growing firms have been found to occur often in fast-growing industries such as the high-technology industry (Davidsson and Delmar1997, Chamanski and Waago 2003). Bridge et al (2003) though accept the importance of sectoral analysis of firm growth as a way of highlighting particular constraints and opportunities of sectors, they are with the opinion that such studies do not offer a basis for predicting the extent to which growth businesses will emerge. They further argue against placing high reliance on sectoral performance, for the reason that performance within sectors varies to a much greater extent than across sectors.

Firm's geographical location has empirically been found to impact on growth (Storey 1994, Barkham et al 1996, Davidsson 1989, Almus and Nerlinger 1999). Bridge et al (2003), argue however, that the interaction between location and factors such as competition, labor market and government support make it complex in determining the actual impact of location on growth. Almus and Nerlinger (1999) found that the effect of location on firm growth is affected by firm size, that the smallest and large firms had the least location effects. They contend that location effects may be closely linked to industry factors that are associated with size, industries or industry cluster.

2.5: Management Strategy

This section examines the manner in which strategic management impacts on small firm growth. Stokes (1998) defines strategy as a plan or pattern that brings together an enterprise's major objectives, policies and activities into a cohesive whole, and providing the direction necessary to allocate the resources of the enterprise in a unique and viable way, by taken into account internal strengths and weaknesses as well as factors from the external environment.

Strategic management has been largely associated with large businesses, with most of its theories developed and tested using large firm data (Mazzarol 2003, O'Gorman 2000, Joyce et al 1996, Unni 1984, Ansoff 1965).

On the other hand Marsden and Forbes (2003) are with the opinion that small firm strategic theories can be derived from the perspective of general strategic researchers, as well as from those specializing in the field of small firm research. They further state that the interest of general strategic management specialists is to develop an analytical framework and concepts applicable to all firms regardless of size, those specializing in small firm research view the small firm as different from their larger counterparts. The differences between small and large firms have been echoed by many researchers (Penrose 1959, Storey 1994, Stanworth and Curran 1976, Curran and Blackburn 2001, Jennings and Beaver 1997, Bridge et al 2003, Barkham et al 1996). Penrose (1959) for example argues that small firms are as different from large firms as a caterpillar from butterfly, such that it is not appropriate to apply models developed in the study of large firms' growth to that of small firms.

Jennings and Beaver (1997) also reject the application of large firms' strategic models to small firms on the grounds that management process in the small firm is unique, with little or no resemblance of management process in large firms. They contend further that

strategic management in small firms focus more on how to adapt to the operating environment rather than predicting and controlling the environment.

Storey (1994) provides fourteen elements of strategy that are considered to impact on small firm growth. These elements include product development and innovation, market strategy, business planning, production technology, external equity. Some of these elements were identified as key in determining small firm growth. The willingness of the entrepreneur to accept equity participation provided by outsiders being individuals or organizations is seen to be associated with rapid growth of small firms. Market position or niches was also found to be highly associated with high growth. O'Gorman (2000) supports Storey's finding, by arguing that the choice of competitive strategy within a market determines the performance of the firm. However most owner/managers tend to replicate strategies of other firms often referred to 'me-too' or 'copy-cat' strategy (O'Gorman, 2000). Finally the owner/manager's willingness to delegate and allow participatory decision making process to work is considered to facilitate high growth, this could also lead to the firm's ability to attract, motivate and retain trained and skilled personnel.

Barkham et al (1996) argue that certain business strategies will impact on the firm growth regardless of the type of owner/manager who is running the firm. Formal planning has a positive impact on small firm performance regardless of the growth stage within which a firm may be operating and those firms engaged in growth stages are likely to benefit even more from higher sales growth (Robinson et al 1984). Barkham et al (1996) found that marketing strategies were most strongly associated with growth. This finding is supported by Mazzarol and Ramaseshan (1998) who found a significant association between small firm formal marketing plan and performance. The variables found to be important in this respect were, the importance that the owner/manager attaches to marketing activities, the desire to improve sales and marketing, the undertaking of market research and an emphasis

on pricing as a strategy. The positive link between marketing strategies and small firm growth has also been emphasized by Smallbone et al (1995) and Tzokas et al (2001).

The strategic choice of small firms is arguably dependent on the characteristics of the owner/manager (Ennis 1998, Unni 1994). In small firms strategic decisions are said to be based on intuition and less formal (Ennis 1998, Unni 1994, O'Gorman, 2000). Posner (1985) argues that entrepreneurs do not plan because they lack the needed confidence, knowledge and skills to undertake any useful planning. In their analysis of strategic management styles of small businesses, Joyce et al (1996) provided four different styles as being: Strategic Planners, Short-Term Planners, Informal Strategists, and Evolutionists. They found that the first style which is often expressed in the form of formal business plans with planning horizon of three years and above, are less popular with small firms, as many small firms do not consider it useful to plan long term while they have less influence on the operating environment. In view of this some small firms choice to react to the exigencies of market forces, and consider that they are the consequences of the evolutionary effects of such forces, labeling this style as 'the evolutionists' (Joyce et al 1996, Whittington 1993). Matthews and Scott (1995) also argue that sophistication in planning among small firm declines as the level of environmental uncertainty increases, suggesting that small firms are likely to adopt crisis management when faced with external environment challenges.

Joyce et al (1996) claim that there are other businesses which carry out long-term planning, but done it informally (i.e. without any formal business plan). These they term as the 'Informal Strategists' and though doubt the rigor and depth of such plans, but consider that this could give rise to strategic approach to business decisions. This view is supported by Schindehutte and Morris (2001) when they stated that small firms often do not have formal, written statements of strategy, or they specify them in very general terms. In this case the actual strategy of the firm would have to be deduced from evolving patterns of

behavior and resource allocation. Finally there are those businesses with business plan that are produced to cover the present not meant more than a year or two, labeled as 'Short-Term Planners'.

Joyce et al (1996) conclude that strategically managed businesses show better performance as they prove to be better mangers of innovations. Pleitner (1989) on the other hand holds the view that many small business entrepreneurs are successful without explicitly practicing what is often considered as strategic, and that the necessity for strategic behavior depends on characteristics of the firm and the type of entrepreneur involved (i.e. personal background and objectives).

Mazzarol (2001) concludes that evidence suggests the existence of relationship between small business growth and formal planning; however it may be difficult to clearly identify the linkage between the two, that contextual issues like the background of the owner/manger, the industry within which the firm is located and the external environment may all have impact on the relationship.

2.6: The External Environment

To adequately explain and understand small firm growth require an examination of the impact of factors external to the entrepreneur and the firm (Bridge et al 2003, Porter 1980). Wyer (1997) argues that the impact of external influences and the unpredictable nature, within which the environmental changes occur, provide a major impact on the nature and pace of small business growth. O'Gorman (2001) also argues that the external environment can serve as a constraint to the firm, therefore the growth of the firm can be explained in terms of the environmental forces.

Using the population ecology model, O'Gorman (2001) explains that the environmental pressures make competition for resources the main focus of organizational activities, such

that growth becomes a function of environmental selection and suggesting that the choice of a firm's environment is critical to the firm's growth potential (O'Gorman, 2001).

The external influences on small firms have been categorized into two main groups by Stokes (1998), being the macro and micro environments. According Stokes (1998) the macro environment consist of factors which tend to have an impact on the firms nationally and sometimes internationally, which includes factors like: political and regulatory factors, economic conditions (e.g. inflation), social and demographic influences, and technological changes. The micro factors refer to more local factors which influence particular firms such as: local socio-economic conditions, the market development of the particular industry, the competitive environment and customer needs.

The impact of the external environment appears to be higher on the small businesses than lager firms in view of the fact that small firms are generally involved in narrow range of activities, operate within limited market and employ few skill personnel (Smallbone and Wyer, 2000). In the light of this, contingency theorists hold the view that the growth of firms cannot be studied without looking at the firm's environment and specific situation (Gilad and Levine, 1986).

The disadvantage of being relatively small and lean can be lack of depth in certain activities (e.g. marketing) that are considered vital for growth, lack of managerial experience, under-capitalization, inefficient scale of operations and inadequate resources to withstand changes in the market conditions and technology (Robertson, 1996). Compared with large firms, small firms are more vulnerable to environmental forces, due to their limited liquidity and debt capacity, their frequent over-dependence on a limited products/service line, and their tendency to rely on a niche customer base (Schindehutte and Morris, 2001). The liability of smallness can also be looked from the perspective of raising capital, fewer tax advantages, and proportionately greater costs from regulation, as compared with larger firms (Aldrich and Auster, 1986).

The behavior of large firms within the operating environment is another important issue impacting on the small firm growth (Smallbone and Wyer 2000, Robertson 1996). The strategic intent of large firms regarding for example subcontracting and strategic partnership with small firms are seen as key determinants of small firm growth potential (Smallbone and Wyer 2000).

Whiles, the external environment is considered important in the study of small firm growth, it can be argued that the entrepreneur has the ability to control or effect changes in the environment (Bruyat and Julien 2000, Rotter 1966).

The firm's macro environment (i.e. laws, taxation, access to capital, inflation etc.) are considered very important to small firm growth (Andersson, 2003). The business competitive environment is also seen to be important for firm growth (Porter, 1990).

Changes in business environment come with it both opportunities and treats for the small firm (Miller 1987). These changes can create dynamics in demand to create the needed condition for growth (Wiklund, 2001). Miller (1987) equally states that dynamic environments are associated with high unpredictability of customers and competitors, and high rates of changes in market trends and industry innovation.

2.7: The Perspective of LDCs

In view of certain differences in the market and institutional characteristics between developed and developing nations it is imperative to conclude that some of the theories explaining small firm growth will not be applicable in developing countries (Tybout 2000). He notes that, most developing economies are characterized by small market size, lack of access to manufactured inputs, low rate of skilled labour, lack of adequate infrastructure, extreme macroeconomic and relative price volatility and poor legal systems and governance. Dual market structures continue to exist, as most of developing countries inherited a number of large enterprises from the colonial rule (Kaufmann and Parlmeyer,

2000). Again many African countries immediately after independence pushed for rapid industrialization with state controlled enterprises. This duality still remains not withstanding the ongoing privatizations (Aryeetey and Harrigan, 2000).

In the mid 80's many developing countries embarked on reforming their economies, this has rather led to high devaluation of national currencies, domestic fiscal and monetary policies have drastically been affected, reduced purchasing power, and lack of availability of finance for investments (Mambula and Sawyer, 2004). Mambula and Sawyer (2004) further argue that scarcity of foreign exchange has affected small firms' ability to import capital goods and raw materials therefore impeding growth.

Having regard to differences in the market characteristics in developing countries, as well as the failures of existing theories to explain the mostly observed dual market structure in developing countries, Goedhuys and Sleuwaegen (1999) note the role of institutional influences on firm growth in developing countries. Goedhuys and Sleuwaegen (1999) further argue that the underdevelopment of both input and product markets, the few number of market participants and the resulting high transaction costs tend to shift growth opportunities among firms. They noted that in the light of these characteristics many researchers studying small firm growth in developing countries focus attention on less developed credit market (Goedhuys and Sleuwaegen 1999, Tybout 2000, Smallbone and Welter, 2001).

Some researchers also give high consideration to the concept of informality and formality (Goedhuys and Sleuwaegen 1999, Tybout 2000, Smallbone and Welter 2001, de Soto 1989, Schmitt-Degenhardt et al 2002, Welter and Smallbone 2003). de Soto (1989) argues that in developing nations, institutional weaknesses give rise to high level of informal activities that impede growth of small firms. de Soto (1989) explains that due to deliberate actions of policy makers, small businesses find it difficult to get access to licenses, credits, ownership to properties etc, that in effect prevent such firms from becoming formal. de

Soto (1989) then suggests that in these environments deregulation of the market, improve legal system as well as clear property rights will lead to growth of small firms.

Altenburg (1996) criticizes de Soto's position on growth of informal activities in developing countries on the grounds that in most developing countries reforms are taking place to reduce the bureaucratic and other barriers to formalization of transactions. However, no direct correlation has been found between the degree of reforms and the size of informal transactions (Schmitt-Degenhardt et al 2002). More recently Nwankwo and Richards (2004) reports that the structural adjustment policies spearheaded by the World Bank and the International Monetary Fund (IMF) have woefully failed to bring the needed growth to many African Countries. They argue that most African Countries continue to lack strong institutions that hinder reform efforts and growth.

In their study of firm growth in developing countries, using data from Burundi, Goedhuys and Sleuwaegen (1999) found that the increase in the formal characteristics of a firm increases the expected annual growth rate of employment by 31%. They contend that formal firms tend to grow faster as scare resources are allocated to established firms which have legitimated themselves in markets characterized by high transaction costs. They conclude that institutional factors inhibit firms from having equal access to resources, which affects their growth rates. They further contend that growth process is moderated by institutional factors which tend to shift growth opportunities toward firms with better access to resources. Smallbone and Welter (2001) found similar situations in the former Soviet Countries, when they reported that most SMEs were very small and operate mostly in the trade and services industries and remain in the informal economy so as to keep cost low.

Kaufmann and Parlmeyer (2000) studying small firms growth in Mozambique argue that informal businesses have advantage of often times being cheaper, more flexible and nearer to markets. They further argue that, there are various laws and regulations that these small

firms can by-pass to provide them with certain cost advantage. They conclude that most small firms will not seek growth as an objective, so as to remain competitive and not to lose part of their advantages arising from (no taxes, low salary, no social standards, informal finance flexibility, no bureaucracy, etc.) that loss of these advantages cannot be offset by advantages associated with growth.

Goedhuys and Sleuwaegen (1999) report that regulations tend to restrict large firms more than small firms whose activities are less subject to regulation; informal firms also tend to circumvent most regulations.

Whilst entrepreneurship and small firms behavior are in the main attributable to owner/managers motivation, resources and capabilities, empirical evidence suggests that in less developed and transitional economies the major factor influencing the nature and pace of small firm development is the external environment (Smallbone and Welter 2003, Peng and Heath 1996, Peng 2000). Referring to informal institutions as codes of conduct, values and norms which are embedded in a society, North (1990) contends that these informal institutions act as a resource for small firms' development and growth. Informal institutions like networks and connections are seen as important resource for business development in transition conditions (Smallbone and Welter, 2001). This finding may be applicable to many developing countries. In Ghana for example it is not uncommon to see many entrepreneurs and small firm owners defecting to join the political party of a ruling government soon after elections.

Network and personal contact approach is seen as useful framework in the analysis of small firms' success (Kaminski and Wagon, 2003). Kaminski and Wagon (2003) argue that inter-firm relationships play an important economic role connecting together activities, resources, and actors, as well as improving firms' competitiveness through the enhancement of resources and knowledge. The allocation of support, grants, loans and

other forms of official and private-sector support to small firms are reported to be based on existing networks in Nigeria (Mambula and Sawyer, 2004).

Network and personal contacts are regarded as important tools of solving business problems especially in an environment where conditions for sustainable private development are being installed (Smallbone and Welter, 2001). Most owner/managers are helped by the members of their family (including the extended family) to run their businesses, they provide capital, personal contacts and labor (Neshamba 2002, Mambula and Sawyer 2004). Evidence from former Soviet republics supports the use of networks and personal contacts in the development and growth of small firms (Smallbone and Welter, 2001). Smallbone and Welter (2001) argue that personal trust which is used as a substitute for lack of efficient formal institutions may eventually impact negatively on firm growth and competitiveness.

The commitment of firms to a common interest, however, could serve as a constraint on a firm's development and the strategy that the firm on its own could adopt (Kaminski and Wagon, 2003).

McPherson (1996) using data from five countries in Southern Africa demonstrated that location has a strong influence on small firm growth rate in Africa. McPherson (1996) found that small firms located in commercial districts and urban areas tend to have higher growth rates than those located in rural areas, and explains that access to high-income customers gives a significant edge to the small firms in the urban areas. Goedhuys and Sleuwaegen (1999), Liedholm (2002) and Mambula and Sawyer (2004) came to a similar conclusion and argue that firms located in urban areas are more accessible in view of lack of infrastructure in many rural areas. McPherson (1996) again notes that a firm's proximity to demand sources and to concentrations of competition tend to affect growth and profitability. Firms may also enjoy benefit arising from many small firms located near

each other to build reliable supplier and buyer relationships and are in better position to experience high growth (McPherson 1996).

The above findings of impact of location on small firms' growth in developing countries run counter to that found in the United Kingdom (U.K.). Empirical evidence suggests that small firms located in the more remote rural areas of the U.K. achieve growth rates higher than their counterparts in the urban areas (Keeble and Bryson 1993, Smallbone et al 1993, 1997, Vaessen and Keeble 1995, Hart and McGuinness 2003). Vaessen and Keeble (1995) did not find any negative effect of economic conditions in peripheral UK on the performance and growth of firms located in those areas, rather they argue that it is the nature of competition, the degree of innovativeness and the firms' internal strategy, that allow these firms to reduce the impact of any economic disadvantages in achieving higher growth rate.

Studies into owner/manager characteristics have concluded that training and education, and previous business experience have positive impact on growth of small firms in developing and transition economies (Goedhuys and Sleuwaegen 1999, McPherson 1996, Smallbone and Welter 2001, Liedholm 2002). McPherson (1996) for example confirms that firms run by managers with formal training and education grow faster than those with untrained managers, human capital is therefore considered as an important factor in small firm growth in developing economics. Gender characteristic of owner/managers is found not to have significant effect on small firm growth (McPherson, 1996).

Under the 'life-style firm' where businesses do not seek growth because the owner/manager has already attained certain set objectives, Schmitt-Degenhardt et al (2002) argue against the application of the concept to developing countries. They explain that the concept is based on two assumptions being (a) stable business environment and (b) limited competition in special market which poses no threat to the survival of the firm and the size of its market. They note that in many developing countries heavy industries were setup in

the early 60's as a means of import substitution. The needed stability was given to such enterprises for which they did not find it necessary to adopt any growth strategies. They further note that state protection gave firms the needed protection to guarantee the owners sufficient income to maintain the life-style of an entrepreneur without the need to be one. Currently, the situation is quite different many developing countries have liberalized their economies, which has led to a rapid increase in foreign competition in many sectors traditionally served by small firms. These changes have given rise to high economic instabilities eroding the potential to adopt the 'life-style firm' strategy (Schmitt-Degenhardt et al, 2002).

In Appendix 2.1, we provide some of the characteristics of small firms in general and those normally found in LDCs.

2.8: Conclusion

In this chapter we have discussed existing small firm growth theories and frameworks that have been used by previous small firm researchers. Though there are various small firm growth theories arising from the fact that there are a variety of factors which can influence growth of small firms, we limited our discussion to the life cycle stage model, owner/manager characteristics, firm characteristics, management strategy and the external environmental factors. It is our expectation that these models will have the greatest impact on our research model. Small firm growth relating to LDCs perspective has also been discussed.

To obtain better understanding of these existing theories and the extent of their relevance in Ghana, an exploratory research is carried out. In the next chapter we analyze the results of the exploratory research which together with these existing theories will form the bases of our research hypotheses.

Chapter Three

Exploratory Research

3.1: Introduction

This chapter discusses the research method used and the results of the exploratory research. We conducted unstructured interviews with owner/managers of fifteen small firms. The main purpose was to seek out their perceptions of what leads to growth of small firms in Ghana and factors that hinder growth. The qualitative approach was also to assist in confirming a small firm growth model in LDCs, developed out of existing literature; and the development of research hypotheses. The lack of information and theory concerning small firm growth in LDCs in general and Ghana in particular were the major factors that contributed to the decision to conduct the qualitative interviews.

The exploratory research covered the following areas: the history of the firm, the extent to which owner/managers' attributes impacted on growth, how the firms' own characteristics influenced growth, the impact of business strategies pursued by the firms on growth and finally how the external environment constrained growth.

3.2: The Research Method

In view of the dominant role the owner/manager plays in the growth of a small firm, the target of this exploratory research was the owner/managers. All the respondents were the main decision makers even in firms where there was more than one owner.

The sample was based on data from a major trade grouping that was the Association of Ghana Industries (see Section 5.11). The data has been cleaned to exclude firms which had either more than 250 or less than ten employees. Firms that had ceased to operate at the start of the interviews and firms that were subsidiaries of other firms were also excluded. The sub-sectors covered were: paper and printing, furniture and wood processing, metal works, food processing and plastics and rubber products. Initially the textile and garment

sub-sector was included, it was however, ascertained that most firms in the sub-sector were too large with employment exceeding 400, and or were subsidiaries of multinationals in the case of firms engaged in textiles. Regarding the garment firms we found that many were employing less than 10 people, hence our decision to exclude them.

An interview guide was used (see Appendix 3.1). Each interview lasted between 30 and 45 minutes. Respondents were allowed to discuss freely the factors affecting their firm's growth. In all 15 firms were contacted. This covered six month period from September, 2004 to March, 2005. A summary of our findings was sent to each respondent for comment. Changes that emanated from the feedbacks were effected where necessary.

Data analysis was mainly based on within case and cross content analysis. Descriptive statistics were also used.

3.3: Profile of Sample Firms

The data was stratified based on the number of employees as shown in Table 3.1.

A firm each was purposely selected from the above size groups and from each sector to allow for differences arising from size and sector. Fifteen firms were therefore selected. The oldest firm was established in 1975 and the youngest in 2000 this gave an age range of 4 to 29 years. The smallest firm employed 15 people and the biggest 250.

Table 3.1: Firm Size Analysis

Firm Size	**No. of Employees**	**No. of Firms**
Small	10-50	5
Medium	51-150	5
Large	151-250	5
Total		**15**

Other characteristics of the sample firms are provided in Table 3.2 as shown below.

Table 3.2: Profile of Sample of Firms

Firm	Sector	Number of Employees	Employment Growth Av. % P.A.	Turnover Growth Av.% P.A	Year Established	No. of Shareholders
1	Wood & Furniture	30	3	42	1992	2
2	Wood & Furniture	153	0	29	1986	2
3	Wood & Furniture	51	-9	81	1986	1
4	Paper & Printing	160	7.5	120	1981	2
5	Paper & Printing	15	-40	24	2000	2
6	Paper & Printing	58	81	40	1990	2
7	Food Processing	45	194	496	2000	1
8	Food Processing	151	15	100	1989	4
9	Food Processing	250	172	185	1995	2
10	Plastics	35	250	158	1998	1
11	Plastics	240	229	16	1975	1
12	Plastics	140	-36	40	1995	3
13	Metal	60	43	199	1995	3
14	Metal	104	-20	82	1986	2
15	Metal	28	155	121	1998	3

In Table 3.1 above, sector denotes the sub-sector within the manufacturing sector that each of the 15 firms operates. Number of employees represents the number of people employed by each firm at the end of year 2004. Year established indicates the year that each firm began operation as indicated by the owner/managers, whereas number of shareholders is the number of shareholders each firm had at the end of year 2004. Finally, employment and turnover growths are growth measures for the period 1999-2003. The average annual

growth rates have been calculated as a percentage change of 2003 figures from that of 1999, divided by 4 (number of years) with 1999 as the base year. One weakness of this measure is that it fails to account for fluctuations during the period. It is however simple to use and understand.

3.4: Within Firm Analysis

The purpose of this section is to describe, understand and explain the issues of small firm growth in line with each owner/manager's own perspective. The analyses made are mainly descriptive.

3.4.1 Firm 1

Background

The company was established in 1992 and specialized in the production of home and office furniture by using hard wood. It was a family business owned by two couples. The business was run by the wife as the managing director. The husband has no direct involvement. The initial idea to set up the firm came from the wife when she realized that there was a great demand for quality home and office furniture in Ghana. The firm started producing garden furniture and specialized furniture for homes before adding on office furniture.

Owner/Manager Characteristics

The owner/manager was 62 years old and a Ghanaian. She had 'A' Level certificate and had pursued further courses in wood designing. Her previous experience was trading in furniture and other wood products. The owner/manager indicated her intention to grow the business. She had no prior managerial experience.

Firm Characteristics

The company started with 6 employees and within two years grew to 60. However, by the end of 2004 it had cut down the number of employees to 30, due to shrinking demand for its products.

Business Strategy

The company did not export any of its products directly. However, the respondent indicated that about 30 percent of the firm's products were being exported indirectly. She contended that about 60 percent of her customers were expatriates either living in Ghana or in the neighboring countries who normal bought and exported the company products.

The company has a niche market supplying mainly to the middle and the upper class income earners. The company therefore charged premium for its high quality and custom made products.

The company as part of its policy of maintaining high quality standards did not sell through distributors. It maintained a single showroom in Accra. The managing director noted that more than 60 percent of the company's production was by orders. To be competitive the firm needed to increase investments in a technology, aimed at increasing efficiency and quality.

Constraints

According to the owner/manager the firm faced low demand for its products. The firm lacked efficient and modern machinery. There was also the lack of financial support. Government regulation on timber had created a supply shortage that had increased prices of wood. Thus reducing the competitive advantage the industry had in Ghana over their foreign competitors. The firm was facing a high competition from informal businesses.

3.4.2 Firm 2

Background

The company was setup in 1986 for the production of furniture. It was acquired in 1995 by the present shareholders. After the acquisition, product range was increased and more people were employed. At the end of 2004 it had 153 employees. There were two owners with 51 percent and 49 percent shareholdings. The management was firmly in the hands of the majority shareholder. The other shareholder was on the board of directors.

Owner/Manager Characteristics

The owner/manager was 54 years and had a university degree. He was a Ghanaian, while the other partner was a Lebanese. The owner/manager had a prior working experience with a timber company which was processing lumber for exports. He resigned as production manager after 10 years of service. His father was a timber merchant in the early 70's. He had other business interests, which provided no benefit to the firm being reviewed. His main focus was on this business as the other businesses were being managed by his brother. He indicated this intention to seek further growth of the business.

Firm Characteristics

The firm was located in Kumasi (the second largest city in Ghana). The location was suitable for the firm due to proximity of raw materials. Kumasi is the centre of the timber industry in Ghana. The age of the firm appeared to be an important factor for growth. The managing director noted that over the years the company has built a strong relationship with its customers, suppliers and the financial institutions. For example suppliers of wood were willing to supply on credit to the firm, whiles many of its competitors had to pay cash upon delivery.

Business Strategy

The firm started processing lumber for export in 1998 to Europe, mostly to Germany. The export revenue had over the years increased and at the end of 2004 accounted for more than 60 percent of the company's turnover. The firm used old technology in the past but due to the increased in regulation of supply of timber the firm decided to find ways of increasing its yield. Hence it invested in new technologies that had increased efficiency by more than 50 percent. The firm had no marketing plan. As explained by the owner/manager the focus had been on increasing export which the firm had a ready market.

There were functional managers for the three main departments (i.e. Finance, Administration and Production).

Constraints

The major constraints to growth were cost of borrowing and government regulation that had affected the supply of raw materials. The firm faced high competition from low priced imported products as well as from informal producers.

3.4.3 Firm 3

Background

The firm was established in 1986 as a building construction company. In 1996 it changed its business activity and went into furniture production. This was in response to a high demand for furniture products in Ghana at the time. It abandoned the construction activities a year latter. The furniture section started with less than 5 employees, but quickly grew to 25. The firm has four departments being metal, cane, wood and cabinet, with a special emphasis on production of home furniture.

Owner Characteristics

The firm had single shareholder who was the managing director. He was 41 years old, a Ghanaian and had 'A' Level certificate. He had in the past perused courses in interior decorations in the United Kingdom. He had previous experience in the export of sea foods to the USA and import of goods from Japan to Ghana and Nigeria.

Firm Characteristics

The firm was located in a deprived community in Accra. According to the owner/manager this did not affect its customer base. He believed quality was the most important factor that drove sales for the firm.

Business Strategy

The use of other materials such as cane and metal enabled the company to cut down on input costs. It also allowed for product differentiation, thus given the firm a competitive edge over its competitors who continued to rely on wood as the main source of raw material.

Faced with growing competition from imported furniture the company stopped the production of office furniture. The owner/manager contended that the imported furniture would have completely taken over the industry in Ghana, but for the fact that some customers required specialized and non-standardized products.

The company had no structured management. The owner/manager indicated his intention to introduce new shareholders to increase the managerial and financial capabilities of the firm. The firm had no distribution network. It was unable to meet its demand due mainly to lack of resources to boost production. The firm was not into export.

Constraints

According to the owner/manager the firm's growth rate was impeded mainly by five factors being:

(a) Lack of finance and high cost of borrowing.

(b) Lack of efficient machinery and tools.

(c) High competition from imported furniture that had led to reduction in margins.

(d) High cost of training staff and lack of commitment on the part of staff to increase productivity.

(e) Lack of regular supply of hard wood due to government regulation.

He argued that some customers preferred the imported furniture to the local ones, because the latter were cheaper and with nicer finishing. However, he noted that the imported furniture was mostly of low quality. Due to the general low income levels, many Ghanaians were not able to afford the relatively high priced products of the firm.

3.4.4 Firm 4

Background

The firm started operations in 1981. Immediately after completing his first degree in Land Economy and Estate Management from a university in Ghana, the owner/manager decided to setup his own company. The firm had 160 employees.

Owner/manager Characteristics

Trading in paper products was used as platform to develop the market and experience in the paper industry before the company decided to go into local production. According to the owner manager, the experience from trading had contributed greatly to the growth of the company. The sole owner ceded 30 percent of his shareholding to his wife after marriage in 1995.

The wife, who was 41 years old, had 'O' Level certificate with no prior business and managerial experience. The husband was 46 years old, with prior business activities including trading. They were both Ghanaians.

There was no intention for further growth due to lack of managerial capacity. There was also no intention to appoint other people to management positions to assist further growth, because of lack of trust. The couples had investments in other businesses that provided cash to support the printing activity.

Business Strategy

The business was effectively managed by the couples. The husband was in charge of operations and general administration and the wife took control of sales.

The company in 2004 reduced the number of employees from 200 to 160; as the firm automated its production process. This was also aimed at increasing quality and efficiency.

The company placed high reliance on government contracts. The managing director complained of delay payments for the government related businesses. However, the company had the financial capacity to deal with the problem. It had credit arrangements with its foreign suppliers. The firm had no distribution network.

The company exported some of its products to Togo and Burkina Faso, but had to stop due to default payments. The firm had no immediate intention to go back to the export market.

Constraints

The firm had a shortage of skilled and committed manpower. The owner/manager also complained of the effect of delayed payments. The firm was facing a high import competition especially products from Asia. While the company could easily access credit from its bankers, high interest rate was a concern.

3.4.5 Firm 5

Background

The company was set up by two partners with equal shareholdings in 2000. Each partner had and operated their respective firm for over 5 years before they decided to create one entity for efficient use of resources. One of the partners was into printing, while the other was a designer. The company was into printing and graphic designing.

Since its establishment the company had not seen any significant growth in both employment and turnover. It had 10 employees with a turnover of about ¢500 million per annum.

Owner/manager Characteristics

The misunderstanding between the shareholders made it difficult for the firm to borrow. None of the shareholders was prepared to personally guarantee or provide personal assets in the form of collateral to raise loans from the financial institutions. They were both university graduates, Ghanaians and aged 44 and 38 years.

Firm Characteristics

The company's major line of product was books and brochures printing, supplying mainly to government institutions. The company was located within a cluster of printing firms in Accra. Competition within the area of location was considered very high. However, its location had contributed positively to the company's subcontracting policy, as well as sharing of knowledge and ideas with other firms in the industry.

Business Strategy

The firm started losing customers due to initial conflict between the shareholders. There were no shared responsibilities between the shareholders leading to duplication and gaps

within the management of the firm. One of the partners believed that as none of them had a majority stake, decision making was slow. Instead of synergizing their respective experiences they saw themselves as two masters sailing one boat.

The company started with few machines of its own but had increased its stocks of machines in the recent past. Thus reducing the extent to which it was subcontracting jobs. This was expected to lead to growth of employment in the future.

As noted by the respondent;

"To grow the business requires beefing up marketing activities by employing additional staff, making direct contacts of previous and prospective customers, improving on our delivery time and the quality of our products. To improve quality requires some additional machines, designers and skilled machine operators."

Constraints

The company intended to focus on developing non-governmental related businesses as the government businesses were less regular and suffered from delay payments. Delay payments adversely affected the working capital requirement. One of the major difficulties was lack of working capital.

3.4.6 Firm 6

Background

The company was established in 1990 and was into printing. It had 2 shareholders with the managing director having majority shares. He started the business alone, but in 1995 brought in a partner. He started as graphic designer and was subcontracting the main printing works until he acquired machines in 1994 and went into printing. The company had 58 employees with turnover of ¢1.925 billion.

Owner/manager Characteristics

The majority shareholder was 42 years old, a Ghanaian and a university graduate in graphic designing. He stated that after graduating in 1985 he could not find a job therefore decided to start this business from his bedroom.

With high demand for its products the owner/manager had the intention to grow the business bigger than what it was. There was an intended action to bring in more shareholders to increase the resource base of the firm to allow for quicker rate of growth.

Firm Characteristics

The firm was located in Accra, outside the printing industry cluster.

Business Strategy

The company's customers were made up of individuals, private corporate organizations and government institutions. The company was not engaged in advertising. It won its customers through direct contacts and referrals.

According to the managing director the company had acquired a lot of machines to improve on its technological base and competitiveness. This had led to an improvement in quality of its products and service delivery. This also brought about a reduction in the number of employees.

Constraints

The owner/manager indicated that there were delays in receiving payments from government businesses. However, the company has the financial capabilities to deal with the problem. Growth was limited by lack of finance. The company had a good borrowing relationship with its bankers, however the owners complained of a high interest rate.

3.4.7 Firm 7

Background

The company was into the manufacturing of fruit drinks using oranges and pineapples. It started operations in 1998. It had a single shareholder. The promoter who had an orange firm was pushed into the setting up of the factory when he and other farmers faced difficulties in the marketing of their farm produce.

The company started with one relatively small capacity equipment valued at ¢3million (US$400), and was producing 30 creates a day of one type of juice. Within a year it acquired 3 more machines of capacities five times bigger than the original machine. The company's annual turnover grew from ¢100 million in 1998 to ¢4 billion in 2004. The number of employees also increased from 5 in 1998 to 53 in 2004.

Owner/manager Characteristics

The owner/manager was into other businesses which had no relationship with the food processing firm. He was 45 years of age and a Ghanaian. He went into entrepreneurship at the age of 25. He previously managed his mother's business.

Firm Characteristics

The firm was initially located in Tema (the industrial city of Ghana). Misunderstanding among the initial promoters led to the relocation of the business to it present site in Accra.

Business Strategy

The company had more than six types of products. It intended to setup a bigger capacity factory at one of the citrus farming areas in Ghana to take advantage of a cheaper source of raw material. However the company had to find a cost effective way of getting its products to the market. An efficient distribution system was also needed.

The owner/manager indicated that the firm was not able to produce enough to meet demand. The firm was not engaged in export, but had an intention to export concentrates to Italy where equipment for further expansion was being acquired.

The company believed that its success was mainly due to the product quality. The managing director explained that most Ghanaians had become conscious of their health and therefore preferred to take natural fruit drinks.

Constraints

The major constraints to growth were access to credit and availability of bottling. The bottling problem could be solved by using non-returnable packing materials. However, the additional investments in machinery required and expected increase in other costs made such an investment less attractive. The continued supply of raw materials through the year was a major concern to the company.

3.4.8 Firm 8

Background

The company was one of the eight companies in Ghana that were into the production of cookies and biscuits. It was the only Ghanaian owned which was operating at the time of this research. The rest of the companies were owned by immigrants mostly Indians.

The company was established in 1989 with 11 employees. It was started by its current managing director who owned 70 percent and the rest by his wife and mother. None of the other shareholders was part of the management team.

Owner/manager Characteristics

According to the owner/manager the firm was established after he resigned from a competitor's firm. He had 25 years prior related industry experience. He was once the

production manager, then the general manager and eventually the managing director at the previous work place.

He was a lawyer, a Ghanaian and 59 years old. He wanted to be independent; this motivated him to establish the firm. He had another company which was into aluminum, however all his attention was on this firm. He intended to grow the business further.

Business Strategy

He intended to raise additional capital through a public offer at the Ghana Stock exchange. The company's initial market target was schools, thus producing less expensive cookies. At the end of 2004 it changed its strategy and began selling to the general public. The school sales were accounting for about 50 percent of turnover.

It had key distributors and also made direct sales to some retailers. The company in 2003 attempted to add to its production line biscuits; however some of the equipment imported for that purpose was stolen, halting the early completion of the project.

The company was not engaged in export. An initial attempt to export to Nigeria run into problems as the Nigerian customer defaulted on payment. The managing director indicated his intention to develop the export market in West Africa as a way of ensuring future growth.

The company has three departments being Finance, Production and Marketing. Each of these departments had a head who reported to the managing director.

Constraints

The company's growth rate was constrained by lack of finance for working capital and equipment acquisition. The firm also complained about the level of staff commitment to the growth of the company.

According to the managing director the company's products faced a high level of unfair competition from imported products. He indicated that some of the imported products were being sold at a price lower than the price of floor in Ghana, and alleged that some importers were not paying the right taxes.

3.4.9 Firm 9

Background

The firm was owned equally by two Indian brothers. It was setup in 1995 and manufactured biscuits. It was managed by the two shareholders, one in charge of operations and the other administration and finance.

Owner/manager Characteristics

Though the shareholders were of Indian origin, they were born, schooled and worked in Ghana. One was a university graduate with high interest in the processing of agricultural products. He worked with the Ministry of Agriculture for 25 years before resigning to form the company. The two shareholders in the past had other businesses; however they abandoned them due to time and commitment required to manage the growth of the business under review.

Business Strategy

The company targeted the lower end of the market especially the youth and therefore produced low priced products. By this policy the company was not in direct competition with relatively expensive products imported from the advanced countries. According to the managing director when they started there was no local competition. About 8 more firms manufacturing biscuits with a similar market target had since been set up. The company continued to maintain its dominance position in the local market. It was heavily into

advisement. It had a strong distribution networks in a greater part of the country. The independent distributors were supported by the company in various ways such as provision of free transport and credit sales.

To keep up with the growing demand the company continually invested in new machinery and technology. The new equipment had increased efficiency in terms of material mix and had reduced energy consumption. It also increased production capacity by three times.

The company was not involved in export. According to the managing director the firm was not meeting the high local demand.

Constraints

One of the major problems that the company faced was illegal importation of biscuit into Ghana which were sometimes sold below the company's cost of production. Below was the comment from the managing director:

"We coordinate with the Customs Excise and Preventive Services (CEPS) Task Force to monitor illegal importation of biscuits into Ghana. If the biscuit manufactures' association had not been there, I think the imports situation would have been worse."

The respondent also considered cost of borrowing as very high; however the firm could easily access credit from its bankers.

3.4.10 Firm 10

Background

The firm was established in 1998 by an Indian as a single shareholder. It started with 6 people mainly family members. It was employing 35 workers at the end of 2004.

Owner/manager Characteristics

The owner/manager, who was 46 years old, had a masters degree in telecommunication engineering. He managed other businesses in Liberia before moving to Ghana. In Ghana he started trading in plastic films before commencing the local production.

Firm Characteristics

It produced plastic films for the local market, and located in the industrial area of Accra.

Business strategy

It was not involved in export. There was no structured management team. Most decisions were taken by the owner/manager and his family members. The company was selling directly to customers, at the factory. It had no distribution network. The firm started with two machines, but at the time of the interview had eight additional machines. It was producing at about 90 percent of its installed capacity. The firm had excess demand.

Constraints

According to the owner/manager the only constraint to growth was finance. It had no collateral to support further borrowing.

3.4.11 Firm 11

Background

The company was established in 1975 by two Indian brothers. In 1984 one sold his interest to the other. In 1992 all the company's shares were sold to a nephew who was 29 years old at the time. The firm was initially a textile company but was converted into manufacturing of plastic products in 1978.

Owner/manager Characteristics

The owner/manager though had no business experience before joining the company, worked in all the important sections of the company prior to becoming the managing director. Such experience accordingly enabled him to understand all the workings of the various departments and therefore able to coordinate the company's activities very well. He was a graduate of a university in Europe. He believed that the European education encouraged him to become an entrepreneur.

With a strong family entrepreneurial background he was motivated to go into self employment to maintain the family status quo. He believed that entrepreneurship was the fastest way to become rich.

Firm Characteristics

According to the owner/manager the age of the company has a positive impact on its ability to obtain resources for growth. For example the company had been operating for 28 years and had built good track record with its bankers. This allowed the company to have quick access to funding for its projects. It had also developed a strong customer base over the years and had a good knowledge of the local market.

The company was located within an industrial area in Accra, where most of the plastics companies were also located. The clustering of the plastic firms within the area allowed for cooperation among the firms, and encouraged competition.

Business Strategy

Since he took over, the young entrepreneur decided to grow the business by introducing more products. He acquired new and modern production equipment, changed the

production and administrative setups, and computerized the sales and stocks systems to ensure high productivity and growth.

The company had a distribution network in most of the major towns in Ghana, and provided free transport for its distributors.

According to the managing director being the sole owner of the company afforded him the latitude to take quick decisions needed to grow the business. To quote him '*owing 99 percent of the company helps to grow the business faster, because it makes less red tape'*.

One major characteristics of the company was product innovation, over 100 new products were added to the company's line of products during the past five years. New product addition appeared to be frequently pursued by the household plastics product manufactures.

The company was exporting about 60 percent of its products to three neighboring countries being Burkina Faso, Togo and Benin. The company intended to grow its export base, as that market was less competitive.

The firm had a management team of twelve members. There were relatively young people within the team with an average age of 32 years. Meetings were held regularly at least once in every week to discuss issues affecting the business.

Constraints

One of the major constraints to the growth of the business was the price of raw materials which were affected by an increased in oil price as well as devaluation of the local currency. Exports were impeded by the high bureaucracy within the ECOWAS member states. Cost of borrowing was considered to be high.

3.4.12 Firm 12

Background

The firm was setup in 1995 by three Lebanese brothers with 3 machines. At that time they were producing 35 tons a month of PVC pipes and employed 5 people. In 1999 the company won a major contract that allowed it to acquire more machines and expanded its output and product lines. Production was boosted to 150 tons per month in 1999. The company was producing about 300 tons per month, and had 140 employees at the end of 2004.

The company was managed by the eldest of the three brothers for the period 1995-1999. He resigned to manage another family business. His position was taken over by his younger brother.

Owner/manager Characteristics

The family was of Lebanese origin, but had a very long history in Ghana dating back to their grandfather. The owners had a good understanding of the social and cultural behavior of the local people.

The managing director had a prior working experience in Lebanon in another family business. He was earlier in charge of production. He was 35 years old and had a first degree in business administration. He had a passion to grow the business as he stated:

"*I want this company to be one of the biggest plastics firms in not just Ghana but Africa.*"

Firm Characteristics

The company's main products were PVC pressure pipes and sewerage pipes for industrial and residential uses. The company was located within the industrial area of Accra where most of the plastics firms can be found. The managing director believed that location was important for the company's growth. He noted:

"*We are near Katamato which is a hot spot for our products and the busiest market in Accra. That market alone takes about 40 percent of the demand in Accra.*"

Business Strategy

The company had a market share of 30 percent of the local PVC pipes and was second in terms of output, out of the three PVC pipes manufacturers in Ghana. The company had strong positions in the two main market segments of the local market being the private and government sectors. As noted by the managing director

"*One of our competitors is stronger than us in the government contract market and we are stronger in the private market, and the other manufacturer is stronger than us in the private market and we are stronger in the government contract market.*"

In 2002 the company embarked on an export drive. By the end of 2004, it was exporting about 10 percent of its output to the other West African countries mainly Togo, Benin, Senegal, Sierra Leone and Burkina Faso. According to the managing director the export market was less competitive. It was therefore considered as an avenue for growth.

The company had a well developed distribution channel in most part of Ghana. This was in response to the highly competitive nature of the local market.

The company for the most recent two years had not added any new product to its product line. However, there was an intention of introducing trucking and water horses. These and many other products were being manufactured by one of the competitors in addition to the main product line of PVC pipes.

The company had three main functional departments being; Finance, Production, and Administration and Transport. There was the intention to employ a general manager to coordinate the activities of the departments and to ensure that all the necessary reports were submitted on time for effective and quick decision making.

Constraints

The export market faced setbacks such as delay in crossing national borders, extortion of money by officials. There were transportation difficulties as well.

The company as part of its growth strategy extended credit to some customers especially those with government related contracts. Many of these customers defaulted on payments resulting in acute cash flow problems. This led to a temporal closedown of the company for over 6 months in 2004. At the time of the interview the company has resumed operations but had still not recovered fully and was operating less than 40 percent of its installed capacity.

3.4.13 Firm 13

Background

The firm was a family company started by the managing director with 50 percent shareholding. The other shareholders were his wife and a son with 30 percent and 20 percent shareholdings respectively. The other shareholders were non-executive directors, thus not in management.

The company started operations in 1995 from a small room in Accra, by fabricating aluminum doors and frames. At the beginning the company relied on local suppliers for its raw materials due to lack of finance. A friend of the owner/manager provided a loan which enabled the company to import its raw material requirements directly from Italy.

Owner/manager Characteristics

The owner/manager was 46 years old and resigned from his brother's timber firm to setup this company. The owner/manager intended to grow the business by going into the production of aluminum profiles. He had advance level certificate.

Firm Characteristics

The firm started with 6 people. At the end of 2004 was employing 68 people. According to the owner/manager growth in employment could have been higher but for the use of more efficient machines acquired to increase efficiency and quality.

Business Strategy

According to the owner/manager the company's turnover growth rates for the initial 5 years were in excess of 100% per annum. He explained that at the time the industry was young with few companies, competition was therefore less keen. Again the real estate industry in Ghana was booming during that period leading to high demand for the company's products. The company was able to put up a factory in Accra, acquired more modern and efficient equipment to boost production. It then divested its operations and went into block making and roofing titles.

The company's target markets were the individuals of middle and high income groups, as well as government organizations. Due to its higher quality, the company products were more expensive than the industry average. The company however intended to focus more on private rather than the state organizations in its future market drive in order to avoid long delays in payments that characterized government businesses.

Constraints

One major constraint that the firm faced was lack of commitment from the workers. He found his workers to be less skillful.

3.4.14 Firm 14

Background

The company was started by the managing director (60 percent holding) and his wife (40 percent holding) in 1986. The company was into the manufacturing of household aluminum utensils. Both shareholders had managed the firm since it started operations with the wife as an executive director.

Owner/manager Characteristics

The managing director previously worked as an auditor and accountant in two state institutions before resigning in 1982 and went into commercial farming. He had a bachelor degree in business administration and the wife had a masters degree in economics. He was 58 years old and both were Ghanaians.

Between 1983 and 1984, the managing director had a working relationship with an aluminum company in Cote d'Ivoire. The introduction into the industry encouraged him to establish this firm. He did not intend to diversify into any unknown business.

Firm Characteristics

The firm had 104 employees at the time of the interview, having started with 5. The company was located near the biggest and the most active market in Ghana. The managing director believed its location played a major role in the company's growth.

Business Strategy

The firm had grown its business through new products and markets development. The company intended to go into the production of aluminum profiles for the building industry. The company was one of the three leading companies in the aluminum household utensils manufacturers in Ghana. In order to maintain its dominant position it had been at the forefront of introducing new products into the Ghanaian market. For example it was the first to introduce a new type of cooking utensil known as "nonstick". This brand which

required relatively expensive investment in the form of equipment and technology was difficult to imitate.

With an increased in the level of competition in the local market the company decided to develop the export market. It was exporting 70 % of its output to Ghana's neighboring countries mainly Togo, Benin and Burkina Faso.

The company had a five member board of directors with a Chartered Accountant (chairman) and a prominent lawyer on it. The day to day activities were supervised by a management team headed by the managing director and supported by the wife. The general manager was a chartered accountant. There were managers heading the three functional departments being finance and administration, production and human resource. The company prepared its annual budget and had a strategic plan which was reviewed regularly. The entire management team was responsible for preparation and implementation of the annual budget and the strategic plan.

Constraints

The managing director did not consider access to credit as a limiting factor for growth. The level of interest rate was considered to be high enough to discourage any aggressive growth intention. The instability in the world market price of aluminum impacted adversely on the growth of the firm.

3.4.15 Firm 15

Background

The firm was registered in 1995 by the current managing director. He owned 75 percent of the company with the remaining shares held by two of his brothers. The company's initial activity was trading. In 1998 it was turned into a manufacturing company and its name was changed. As noted by the owner/manager:

"I decided to go into more permanent going concern as a result of the profit I made from the trading activity."

Owner/manager Characteristics

The managing director setup the firm after resigning as an Internal Auditor from a brewery company in Ghana. According to the managing director, the low cost of entering the industry as well as regional competitive advantage enjoyed by firms located in Ghana were the major motivating factors for going into the aluminum sector. Ghana had the biggest aluminum manufacturing plant in West Africa at the time this research was being carried out.

Firm Characteristics

The company manufactures aluminum household utensils. The firm as the end of 2004 employed 28 people having started with 8. It had grown its turnover from ¢600 million in 1998 to ¢4.2 billion in 2004. Similarly the assets of the company had been increased from ¢152 million in 1998 to ¢2.7 billion in 2004.

Business Strategy

The managing director was 39 years old and had a first degree in accounting from the University of Ghana. Even before completing his university education he had a passion to start his own business. He stated as follows;

"Long before I completed school I had a focus on entrepreneurship. I registered this firm with my first salary."

He was committed in growing the business especially in terms of turnover and assets.

He intended to go to the Ghana stock exchange to raise more capital for future expansion.

He had an intention to go into the manufacturing of roofing sheets.

Grouping the Aluminum sector into three segments in terms of sales, in the opinion of the managing director the company was in the middle segments. The managing director believed that the company's major competitive advantage came from prudent cost management which then translated into lower selling price of the company's products. He noted;

"*Looking at the history of the industry it used to be a field day for the pioneers, they grew without being conscious of their cost structure, without looking back at the trail of cost. So they got to a level where fixed overheads were so huge that they find it difficult to try to come back to a low and acceptable level. We have learnt from their experiences by adopting a very lean and flexible staffing and other cost management approaches such that we are in the position to price at a level far below them.*"

The company had three main functional departments namely Finance and Administration, Sales and Marketing, and Production. The managing director appeared to be a dominant person within the firm. This was deduced from his statement:

"When *the firm is still young the promoter has a vision and in order to carry the promoter's vision, you need to have somebody of dictatorship. When we have grown up to a level which we have not reach there yet, then at that time we can think of how to function out very good corporate governance policy to carry the company.*"

To allow for time for strategic planning the managing director was considering the creation of a general manager's position to be in charge of day to day management of the company.

The company since it started operations had not added any new product to its line of production. It however, kept on modifying the existing products. The company indicated its intention to introduce new products but was constrained by finance as the initial cost of such project was considered to be high.

The company was exporting over 75 percent of its products to some West African States such as Burkina Faso, Togo and Mali. The exports were conducted through intermediaries

and agents. The company had key distributors and wholesalers across certain parts of the country. However, there was the need to resource some of the distributors to strengthen the company's competitive position.

Constraints

The firm was constrained by lack of required tooling, thus was unable to produce the right product mix which was an important factor for growth.

A high input costs had the effect of eroding the working capital base of the company, and affecting its growth rate. A ton of aluminum in 1998 when the company started operation was ¢6million, in December, 2004 a ton of aluminum was being sold at ¢32 million. The company faced a working capital problem which did not allow it to utilize more than 60 percent of its installed capacity. The managing director stated that further borrowing to increase the working capital base was constrained by lack of collateral security normally required by the financial institutions in Ghana.

3.5.0 Cross Company -Analysis

In this section we analyze the major factors that impacted on growth of the sampled small firms. The section is structured under the following main themes: Growth Measure, Owners Characteristics, Firm Characteristics, Business Strategy and the External Environment. In this section we aimed at enhancing generalizability of our findings as reported in the previous section as well as to deepen our understanding and explanation of small firm growth as discussed with the 15 owner/managers.

3.5.1 Growth

During the interviews, data was obtained on employment and sales covering the period 1999 to 2003 from all the fifteen respondents. This was the most recent period for which

data was likely to be available. Growth rates were calculated by finding the difference between 2003 and 1999 figures as a percentage of 1999 (base year) figures. Sales figures were deflated using end of year inflation rates provided by the Ghana Statistical Service.

As indicated in Table 3.3 below; many of the firms experienced a faster growth in turnover than in employment. Out of the 15 firms interviewed 12 (80 percent) indicated their preference to substitute machinery for labor. For every three of the firms sampled one had mechanized its production line by replacing labor with machines as far as this was possible.

For the purpose of easy reference, the growth definition used is restated below.

Growth Category	**Growth Indicator**
High Growth	Firms that at least doubled the number of employees or sales over the study period.
Growers	Firms that increased the number of employees or sales by more than 20 % but not exceeding 99 %.
Stable Firms	Firms that increased the number of employees or sales by not more than 20 %.
Decliners	Firms that recorded negative growth rate.

Table 3. 3: Analysis of Growth Categories

Growth Category	**Employment Growth.**		**Sales Growth**	
	No. Firms	**%**	**No. Firms**	**%**
High Growth	5	33	7	47
Growth	3	20	7	47
Stable	3	20	1	6
Decline	4	27	0	0
Total	**15**	**100**	**15**	**100**

3.5.2 The Owner/Manager Characteristics

3.5.2.1 Growth Intention

Two (13 percent) out of the 15 respondents indicated their intention not to seek further growth. One of the firms was a plastics manufacturer, while the other was into printing. Both firms were owned and managed by university graduates; one was a Ghanaian and the other an Indian. These firms were within the large firm size category. One was a high growth firm and the other was in the growth category. The Ghanaian owner/manager had other businesses and was satisfied with the current size of the business. He was concerned about the managerial capacity required to handle the challenges normally associated with high growth. This owner/manager had no intention of hiring external human capital for lack of trust.

The Indian owner/manager wanted to stabilize the firm and had also begun investing in businesses in the UK and India. He considered the business environment in those countries to be less constraining. He was also concerned about problems normally associated with high growth. He pointed out;

"High growth rate can also lead to complete loss of entire gains made as it did happen to my father and grand father. I have no intention to grow the business further than the current size, but to focus on stabilizing it."

3.5.2.2 Other Business

Eight (53 percent) respondents indicated that they did not have any other business. These respondents were found to be more committed to growth. For these owner/managers personal involvement was an important factor in achieving growth. Most of the firms lacked resources in terms of financial and human capital, thus did not want to thinly spread such resources.

"If you have the capital then you can think of various investments."

"My former boss had factories in the UK as well. Where he had good concentration, it worked, the others did not work."

Network benefit was considered as an important factor for having several businesses. We provide below some of the comments from the respondents.

"I think sometimes trying to expand into different areas is stressful unless you get trusted people."

"The trading aspect is quite helpful. We need cash flow to support the manufacturing section and that is where (the Trading Section) we get our liquidity. For the manufacturing you have to produce, wait, before selling but we need money."

"We have investments in properties; in case we need any collateral security for a facility we can use it."

Table 3. 4 Analysis of Ownership of Other Business by Growth Category

	Employment Growth				**Sales Growth**			
Growth Category	**No Other Business**		**With Other Business**		**No Other Business**		**With Other Business**	
	No. Firms	**%**	**No. Firms**	**%**	**No. Firms**	**%**	**No. Firms**	**%**
High Growth	1	20	4	80	1	14	6	86
Growth	1	33	2	67	7	100	0	0
Stable	2	67	1	33	0	0	1	100
Decline	4	100	0	0	0	0	0	0
Total	**8**		**7**		**8**		**7**	

The owner/managers who had other businesses achieved a higher growth in both employment and sales as shown in Table 3.4 above. The table indicates that 4 (80 percent) of the firms that were in the high growth category had owner/managers who had more than one business interests.

The owner/managers with university education tended to be slightly more focused on single business than those with a lower educational background. For example 6 (55

percent) out of 11 respondents with university education reported that they had no other business, while 2 (50 percent) of the respondents without university education had no other business. One explanation was that the owner/managers with higher education tended to be more cautious and had a superior investment plan. While the less educated owner/manager was more entrepreneurial and less risk averse. The latter entered into businesses based on intuition. One owner manager noted as follows:

"I don't worry myself with business plan and cash flows. If a project is viable I can feel it. I just run with it."

Finally, the local owner managers appeared to be more focused on single business than the immigrant owner/managers. Six (55 percent) of the Ghanaian owner/managers had no other business, as against 2 (50 percent) of the immigrant owner/managers who had no other business interests. The local owner/managers were found to be resource constrained thus unable to pursue most of their investment dreams. The smaller and the younger firms were limited by resources, hence had less drive to invest in other businesses. The larger firms on the other hand complained of lacked of human capital thus limiting them from expanding into other non-core businesses.

3.5.2.3 Nationality

Four (27 percent) firms were owned by immigrants. Three of these firms were owned by Indians, of which one was into food processing and the remaining two were into plastics. The other immigrant firm was owned by a Lebanese, and was into the manufacturing of plastics. Three out of the four immigrant firms were in the high growth category. This confirmed the perception held by many Ghanaians that immigrant managers tended to be more successful than the indigenous owner/managers. As noted by one respondent.

"The foreign managers are more likely to be committed to their businesses, and provide high supervisory role than we the Ghanaian managers".

Immigrants were also said to be favored by the authorities who felt more secure in dealing with them in a less transparent manner. According to one Ghanaian owner/manager his Ghanaian compatriots were less committed to growth, rather more interested in using their firm's resources for their personal upkeep. He commented as follows:

"*You know our people (Ghanaian owner/managers)…… let them show you their company accounts. You see that their income is nothing, but meanwhile they are riding in big cars with big houses and things like that. These are the things they are interested in.*"

We observed that the immigrant firms started relatively on a larger scale and remained as such. However, the local firms were more likely to be smaller. Two (50 percent) of the immigrant firms were of large size, while 2 (18 percent) of the local firms were large ones. Again the local owner/managers lacked resources to either start on a relatively larger scale or to grow to become large.

3.5.2.4 Prior Industry Experience

Nine (80 percent) of the 15 owner/managers had prior industry experience. There was no clear evidence that firms owned/managed by the entrepreneurs with prior industry experience had higher growth rates than their other counterparts, as shown in Table 3.5 below. Three of the owner/managers previously traded in products they are now manufacturing. These firms showed higher growth in turnover. They continued to use the distribution facilities previously set up to market their manufactured products. One respondent whose previous business collapsed was cautious of growth as a major objective. He noted his experience as follows:

"When business was good I borrowed a lot to grow it further. There were no structures. Before I could see what was happening the business was gone. Now I am careful. I don't have to grow too fast."

One owner/manager who resigned as a managing director from a competing firm to form his own was of the opinion that the experience gained in the previous employment influenced the growth of his business. He noted as follows:

"I learned lessons from the mistakes made in the past."

Table 3.5: Analysis of Prior Industry Experience and Growth Categories

Growth Category	**Employment Growth**				**Sales Growth**			
	No Prior Industry Experience		Prior Industry Experience		No Prior Industry Experience		Prior Industry Experience	
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%
High Growth	2	33	3	33	3	50	4	44
Growth	2	33	1	12	3	50	4	44
Stable	0	0	3	33	0	0	1	12
Decliners	2	34	2	22	0	0	0	0
Total	**6**	**100**	**9**	**100**	**6**	**100**	**9**	**100**

The firms owned/managed by people with prior industry experience tended to be larger.

We noted that with high understanding of the industry and adequate planning, people who were previously working within the same industry set up firms which were relatively larger and had more capacity to grow.

3.5.2.5 Prior Managerial Experience

As indicated in Table 3.6 below, 7 (48 percent) of the 15 respondents had prior working experience, out of which 3 (42 percent) achieved high growth rates and 2(29 percent) experienced decline in employment during the studied period. For these owner/managers prior working experience was important to the growth of their businesses, as one of them noted.

"As I told you I was working with company X for a long time. So I learnt what the fitters were doing, how they turned their spanners."

The owner/managers with prior managerial experience tended to have larger firms and were more likely to start on a relatively larger scale than those without prior managerial experience.

Regarding the 8(52 percent) owner/managers with no prior working experience, they believed it would be difficult for them to work under some one else. Hence the growth and survival of their firms were paramount. Having to learn from their own mistakes on the job was a setback to growth for these owner/managers.

Table 3.6: Analysis of Prior Working Experience and Growth Categories

Growth Category	**Employment Growth**				**Sales Growth**			
	No Prior Working Experience		Prior Working Experience		No Prior Working Experience		Prior Working Experience	
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%
High Growth	2	25	3	42	4	50	3	43
Growth	3	38	0	0	4	50	3	43
Stable	1	13	2	29	0	0	1	14
Decliners	2	25	2	29	0	0	0	0
Total	**8**	**100**	**7**	**100**	**8**	**100**	**7**	**100**

3.5.2.6 Education

Table 3.7 provides an analysis of the educational background of the respondents and growth. Eleven (73 percent) of the 15 respondents had university education or its equivalent. While the remaining 4 (27 percent) respondents had some form of education but below a university level. All the respondents agreed that a higher level of education was an important factor in achieving a higher growth. According to some of the respondents, educational background opened up opportunities including networking. One respondent commented on education as follows:

"*Without education I would not have been able to think the way I do. I will not be confident to interact with my European partners the way I do, and also have the necessary*

ideas, how to learn and share ideas. Without education, I would have remained a small trader; I would not have grown the business to this level."

Table 3.7: Analysis Owner/Managers' Education and Growth Categories

Growth Category	**Employment Growth**				**Sales Growth**			
	No University Education		With University Education		No University Education		With University Education	
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%
High Growth	1	25	4	36	2	50	5	45
Growth	1	25	2	18	2	50	5	45
Stable	1	25	2	18	0	0	1	10
Decliners	1	25	3	27	0	0	0	0
Total	**4**	**100**	**11**	**100**	**4**	**100**	**11**	**100**

One respondent with a university degree and previous managerial experience gave his view on education as follows:

"In view of the many difficulties that we face in running this business I would not have thought twice to find employment elsewhere if I did not have the knowledge and experience to deal with the issues that confront us."

The respondents with university education tended to own/manage large firms. For example only 3 (27 percent) of the 11 owner/managers with university education had firms that were of small size. Using their school network some of these owner managers were able to access credit more easily from the banks. One owner/manager reported that his business plan document was prepared by a bank official who was a classmate. A university graduate respondent also commented as follows:

"We the highly educated have the capacity to manage large firms."

3.5.2.7 Entrepreneurial Family Background

As shown in Table 3.8 below, 9(60 percent) of the respondents had a family history of self employment. However, it was only one of these firms which was owned and managed by a person from the second generation.

Table 3.8 Analysis of Entrepreneurial Family Background and Growth Categories

Growth Category	Employment Growth				Sales Growth			
	No Enerp. Family Background		With Enerp. Family Background		No Enerp. Family Background		With Enerp. Family Background	
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%
High Growth	1	17	4	45	2	33	5	56
Growth	1	17	2	22	4	67	3	33
Stable	2	33	1	11	0	0	1	11
Decliners	2	33	2	22	0	0	0	0
Total	**6**	**100**	**9**	**100**	**6**	**100**	**9**	**100**

Our evidence was that firms owned/managed by persons with entrepreneurial family background showed higher growth rates both in terms of sales and employment. In most cases these firms were involved in activities unrelated to that of their family members. We also observed that all the 4 foreign owned firms had entrepreneurial family background, compared to 5 out of the 11 Ghanaian owned firms. Other family members' involvement in management was found to be high in the immigrant owned firms.

3.5.2.8 Motivation

In light of the relatively high unemployment situation in Ghana it was expected that many of the owner/managers would have been pushed into self employment. However, all the respondents except one said they voluntarily went into self employment.

3.5.3 Business Strategy

The following section discusses the kind of business strategies used by the sampled firms to impact on growth. In particular the following strategic issues have been dealt with: product quality, product innovation, process innovation, export, marketing strategies and management structure.

3.5.3.1 Product Quality

We observed that most of the respondents were aware that product quality was an important factor to achieve growth. They argued that the trade liberalization policy introduced since the early 80s', and the reduced involvement of the state in business had created a high competitive environment. Therefore the survival of many small businesses was largely dependent on the quality of their products.

A few others advanced the argument that many Ghanaian consumers had a low purchasing power; hence to reach out to the larger market required relatively low priced products. According to these owner/managers one could not produce the high quality products like those from Europe and compete favorably. There was the need to cut cost of production to reduce product quality like those from Asia. None of the above policies were found to be industry specific. However, firms involved in exports tended to stress more on the importance of product quality than their other counterparts. The smaller firms that relied on niche marketing strategy stressed the importance of product quality as an important tool for growth.

3.5.3.2 Product Innovation

Product innovation was looked at from two areas namely; (a) the number and the frequency that totally new products were introduced, what normally referred to as 'pure

innovation', and (b) the number and the frequency that products new to the firm but existing elsewhere were introduced.

No firm was found to be engaged in pure innovation. This may be because most of the firms lacked resources to undertake the necessary research and development required. Others found pure innovation to be too risky. Another reason for this could be the general low state of development in Ghana. As there were many products existing elsewhere which were yet to be introduced in Ghana, the firms considered it prudent to copy and introduce such products rather than spend resources in developing something new. Some respondents expressed the fear of imitation by other firms due to the ineffectiveness of the Ghanaian legal and regulatory systems to protect inventors.

Table 3. 9: Analysis of Product Innovation by Sector.

Sector	Low Product Innovation	Percentage %	High Product Innovation	Percentage %
Wood Processing	1	14	2	25
Metal Works	2	29	1	13
Food Processing	0	0	3	38
Paper & Printing	2	29	1	13
Plastics	2	29	1	13
Total	**7**	**100**	**8**	**100**

In Table 3.9 above we provide a sectoral analysis of how the sampled firms perceived product innovative activities. All the 3 firms within the food processing sub-sector indicated that they frequently added on new products onto their existing line of products. Being a relatively young industry, the fruit juice producers wanted to introduce a lot more new products to gain market share. The strategy was also to offer consumers a varied choice as was being offered by the importers of similar products. The least product innovating sub-sectors were the plastics, the paper and printing and the metal works. However, a company in the household plastics reported that over the past five years it had introduced more than 100 new products and stopped the production of many others. We

observed that the high product innovation was normal within the household plastics manufactures but not to the other plastics and rubber firms.

We also observed that the large firms were more likely to adopt product innovation. For example 2 out of the 3 large firms sampled were highly involved in product innovation as compared to 3 firms out of 6 for small and the medium sized firms.

Table 3. 10: Analysis of Product Innovation by Firm Size.

Firm Size	Low Product Addition	Percentage %	High Product Addition	Percentage %
Small	3	43	3	38
Medium	3	43	3	38
Large	1	14	2	25
Total	**7**	**100**	**8**	**100**

Firms involved in exports were also found to be more likely to undertake product innovation and improvement of existing products. One plausible explanation for this could be that such firms had the resources to undertake innovative activities. It could also be due to the competitive nature of the export market.

"We were compelled to improve on our quality when we moved into the export market. The competition is high. Our sales agents are so demanding."

The above was a comment from a respondent.

3.5.3.3 Process Innovation

The extent to which technology was used to improve on the manufacturing process was assessed. The enhancement of the manufacturing process was regarded as impacting positively on product quality and cost efficiency, which could result in growth. Process innovation was assessed from two main angles, (a) whether the firms continually use process innovation as a strategy to achieve competitive advantage and growth, and (b) to ascertain the frequency at which technology was changed to improve on production process. The effect of changes in technology on employment was also assessed. All the

respondents agreed that technology was as an important tool for gaining a competitive advantage.

Eight (53 percent) of the firms believed that their production technologies were less adequate for achieving the required quality and cost advantage over their competitors. The firms that showed a higher level of process innovation achieved a higher growth in turnover. However, they accounted for the least growth in employment. As explained elsewhere the implicit cost of labor was regarded to be high as such firms tended to substitute labor with technology.

It was also reported that the choice of technology was affected by the owner's level of experience and education. The following was noted by one respondent.

"Often people with unrelated background enter an industry and get it all wrong with the choice of technology."

Some of the respondents reported about their own experience of initially selecting inappropriate technology, resulting in stagnation or decline in growth until suitable changes were effected in the production process.

It was however noted that a high level of technology could adversely affect growth. This was because most firms lacked the requisite skills to operate and maintain sophisticated technology. The initial cost of investing in technology was sometimes considered high in relation to the capacity utilization due to the relatively low demand. The existence of uncertainty about future demand conditions made some of the firms select technologies that were only appropriate in the short run but hindered future growth.

Whilst some firms had invested in the rehabilitation of their equipment and acquired additional ones, others admitted that they needed urgent rehabilitation of their equipment to survive. All respondents agreed that growth was influenced to large extent by the manner in which the firms built their internal technical, managerial and organizational

skills to deal with technological changes. This involved adaptation of original technologies to make them suitable for the local conditions.

3.5.3.4 Marketing Strategy

The marketing strategies adopted by the sampled firms can be categorized into two main groups being; mass market and focus or niche market. The adoption of either of these strategies was based on industry, firm size and the availability of resources such as cash and technology.

In the household aluminum products for example one of the two firms interviewed initially adopted mass market strategy but later on moved into the production of high quality products targeting the high income earners and the export market. Table 3.11 below shows the common marketing strategies adopted based on a firm size and an industry.

Table 3.11 Analysis of Marketing Strategies

Firm Size	**Industry**				
	Furniture & Wood	***Metal Works***	***Food Processing***	***Paper & Printing***	***Plastics & Rubber***
Small	Niche	Niche/Mass	Mass	Mass	Mass
Medium	Niche/Mass	Niche/Mass	Mass	Mass	Mass
Large	Mass	Niche/Mass	Mass	Niche/Mass	Mass

The company which was the third largest in that industry in terms of market share continued to produce for the lower end of the market. The other competitor included in the sample, produced low quality products, and had the lowest prices. It relied on a higher volume. According to the owner/manager the firm lacked the resources to acquire the technology required to move into the production of high quality products.

The household plastics manufacturing firms which were relatively bigger in terms of number of employees adopted the mass market strategy. One owner/manager explained

that household plastic products were generally meant for the poor and therefore had a wider market.

"The plastic industry is for the mass market for the simple reason that most Ghanaians, the Togolese and the Beninors, are from low income background. They cannot afford the expensive cutleries and utensils that in Europe one can afford."

Firms within the furniture and wood sector were found to be adopting niche market strategy. This can be explained by two reasons: firstly there were so many informal single producers of furniture products. These informal producers for various reasons including non-payment of taxes had lower costs of production, thus were more competitive than the formal firms within the sub-sector. However, the informal producers lacked the technology to produce high quality products to satisfy the higher end of the market. The second reason was that, imported furniture though had wide range of qualities to satisfy the various market segments, but products were standardized. The above situations therefore provided a gap. The firms interviewed provided high quality custom made furniture for the high income earners. While this marketing strategy could result in higher return, demand and for that matter growth were uncertain.

3.5.3.5 Marketing Orientation

The existence of an effective marketing strategy was expected to be an important factor affecting the growth of the sampled firms.

We observed that of the fifteen firms 7 (47 percent) were marketing oriented. Some of these firms had either marketing departments or sales officers. Some of the marketing strategies pursued by the firms included diversified product mix, improved product quality, increased advertisement, improvement in packaging and provision of incentives to customers. In the metal works sub-sector all the 3 firms were found to be marketing oriented. This could be an indication of the strong competitive environment within the sub-

sector. It should be noted that the sub-sector experienced the highest growth rate during the period which could have resulted in the high marketing activities within the sub-sector. One of these respondents observed as follows:

"We have the demand, yes, but you can't take it for granted that you are enjoying patronage today, because you need to consistently sharpen your marketing efforts. That is the only way you can assure yourself that your customers will forever remain your customers."

The smaller firms were less marketing oriented. For example 3 (60 percent) of the 5 small firms reported that they did not undertake any marketing activities, while 3 (75 percent) of the 4 largest firms were marketing oriented. Lack of demand and resources were reported as some of the reasons why the small firms were reluctant to undertake high marketing activities. As noted by one respondent:

"I need money for marketing and expansion. Without that we will find it difficult to grow."

For the smaller firms, customers were often won through direct contacts and referrals. Marketing activities for these firms were conducted informally and with high involvement of the owner/managers.

In the case of the larger firms, marketing was considered as a very important factor for achieving growth. Below is a comment from one of such firms.

"As we are becoming bigger we need to strengthen our marketing department in order to sell our high volume of production."

Table 3.12: Analysis of Marketing Orientation and Growth Categories

Growth Category	Employment Growth				Sales Growth			
	High Marketing Oriented		Low Marketing Oriented		High Marketing Oriented		Low Marketing Oriented	
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%
High Growth	3	60	2	40	4	57	3	43
Growth	2	66	1	33	2	29	5	71
Stable	1	33	2	67	1	100	0	0
Decliners	1	25	3	75	0	0	0	0
Total	**7**		**8**		**7**		**8**	

We observed that high marketing orientation had a direct relationship with growth in employment and sales. Detailed analysis of marketing orientation and growth is presented in Table 3.12 above.

3.5.3.6 Product Diversification

Fourteen (93 percent) of the 15 firms sampled were less often engaged in the manufacture of products which were unrelated to the main product lines. Whilst it can be argued that product diversification was a sign of entrepreneurial flair and could be associated with high growth, the other argument was that diversification may be pursued due to the recognition of decline in growth of existing line of business. Surprisingly, even those firms that declined or did not show any significant level of growth especially in turnover had not diversified and did not indicate any intention of doing so. The common reasons that were assigned by the respondents were that diversification could have placed a considerable strain on their limited financial and managerial resources. They also feared losing focus and getting it wrong in new and possibly unfamiliar areas.

3.5.3.7 Export

Out of 15 firms interviewed 5 (33 percent) were engaged in export. While some of these firms conducted their exports directly, others did it through agents. One company not directly engaged in export however had about 60 percent of its products purchased by expatriates in and around Ghana, who then exported them. The exporting firms appeared to be larger and had longer history of operation. There was no evidence suggesting that the exporting firms had a higher propensity for growth than the non-exporting firms. For example only two (40 percent) of the five high growth firms were exporters as shown in Table 3.13. Export appeared to be industry based. For example none of the printing firms and food processing firms was engaged in export, while two (66 percent) firms each of the metal works and plastics were engaged in export.

The high importation of biscuits into most of the West African countries from Europe and Asia had affected the export potentials of the food processing firms in Ghana. Most of the fruit juice processors had products with short life span, hence were less likely to enter the export market. The plastics firms took advantage of the political crisis in the neighboring Cote d'Ivoire. During the studied period Cote d'Ivoire which was a leading exporter of plastics and rubber products within the sub-region was politically unstable. This provided an advantage for firms in Ghana to increase their export base within the sub-region.

Table 3.13: Analysis of Export and Growth Categories

Growth Category	**Employment Growth**				**Sales Growth**			
	No Export		Export		No Export		Export	
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%
High Growth	3	30	2	40	6	60	1	20
Growth	3	30	0	0	4	40	3	60
Stable	2	20	1	20	0	0	1	20
Decliners	2	20	2	40	0	0	0	0
Total	**10**	**100**	**5**	**100**	**10**	**100**	**5**	**100**

A higher proportion of exports for firms within the plastics and rubber and the metal works sub-sectors were to the West Africa Sub-region. One important finding was that all the exporting firms started supplying to the local market before moving into the export market. One respondent explained as follows:

"When our local market share was being threatened by the small and informal producers we have to move out and seek new markets in the neighboring countries."

Most of the non-exporting firms declared their intention to go into export but were limited by lack of financial resources. For others the local demand exceeded supply, thus export became less attractive. Most of the respondents complained about the difficulties in the export market including: delayed payments, lack of efficient transportation, and lack of trade cooperation among the neighboring countries. Nigeria with the biggest market within the sub-region for example did not allow the importation of certain products including processed foods. There was also a problem of extortion of money by custom officials in Ghana and the importing countries within the sub-region.

3.5.3.8 Distribution Channels

All the respondents agreed on the importance of effective distribution channel to growth. We observed that, firms with effective and wider distribution channels showed higher growth and were larger. The small firms may have lacked sufficient financial and managerial resources to put in place an effective distribution channel, and/or were unable to produce large enough volumes to attract independent firms as distributors. Firms that had adopted niche marketing strategy were less likely to have independent distributors as such firms considered customer relationship as a very important factor for achieving success.

3.5.3.9 Management Team

The role played by non-shareholding managers and the extent to which their characteristics influenced the growth of the sampled firms were assessed. In particular we wanted to know the extent to which the firms relied on the employed managers to effect growth. As shown in Table 3.14 below, 8(53 percent) of the 15 firms had a structured management team.

We observed that all the 3 large sized firms had structured management, while 3 (50 percent of the small firms had structured management. The older firms also tended to have a structured team, as well as the foreign owned firms. For example 3 out of 4 immigrant firms had management team in place, while 5 (45 percent) of the 11 locally owned firms had it. Regarding the age of the firm one respondent commented as follows:

'*When the firm is young the promoter has a vision and in order to carry out the promoter's vision, there is the need to have somebody of dictatorship.'*

It was noted that even in some of the large firms with functional managers the extent of delegation and the involvement of the employed managers in the decision making process was limited and ineffective. The most frequently cited reason was lack of trust. Other owner/managers also reported that they did not engage qualified managers for financial reasons.

Table 3.14: Analysis of Management Team and Growth Categories

Growth Category	**Employment Growth**				**Sales Growth**			
	No Management Team		Management Team		No Management Team		Management Team	
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%
High Growth	1	14	4	50	2	29	5	63
Growth	2	29	1	13	5	71	2	24
Stable	1	14	2	25	0	0	1	13
Decliners	3	43	1	13	0	0	0	0
Total	**7**	**100**	**8**	**100**	**7**	**100**	**8**	**100**

There was however, a general agreement among the respondents that growth normally led to a higher complexity in the management of small firms which required an effective delegation, supervision and varied managerial skills to push for further growth.

It became clear from the interviews that firms seeking growth had to pay much attention to staff training. The large firms were more likely to conduct on the job training and be able to send their staff outside Ghana for further training. The immigrant firms were also more likely to invest less in training as they tended to engage more expatriates who had the requisite skills.

For all the firms interviewed with the exception of one, the major problems with employees boarded on skills and commitment. These problems were mostly related to how the firms were started, as well as the recruitment practices the firms adopted. Most firms started on a small scale using family labor. It was also found that most of the firms sampled did not have effective policies in place to ensure the retention of staff. This invariably affected the owners' attitudes towards training.

Finally most of the sampled firms had no effective system of controlling theft within the work place. Controls were mainly based on trust and hear say, most often resulting in mistrust among workers, which tended to affect motivation and commitment.

3.5.4 Firm Characteristics

This section analyzes the impacts on growth arising from factors relating to the firms themselves that became prominent in this exploratory study.

3.5.4.1 Sector

The growth rates varied among the sectors. The food processing sub-sector experienced the highest growth in terms of both employment and sales as indicated in Tables 3.15.and 3.16 below. The least growing sub-sector was the furniture and wood processing. Most of the

respondents were with the view that growth was affected by the overall growth rate of other related sectors and the Ghanaian economy in general.

Table 3.15: Analysis of Employment Growth by Sector

Sector	High Growth		Growth		Stable		Decline		Total
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms
Wood Processing	0	0	0	0	2	67	1	33	**3**
Metal	1	33	1	33	0	0	1	33	**3**
Food Processing	2	67	0	0	1	33	0	0	**3**
Paper & Printing	0	0	2	67	0	0	1	33	**3**
Plastics & Rubber	2	67	0	0	0	0	1	33	**3**
Total	**5**		**3**		**3**		**4**		**15**

Firms within the metal works sub-sector experienced the highest growth rates. This was due to a comparative advantage in the supply of raw materials enjoyed by these firms over their counterparts in the sub-region. The firms in the furniture and food processing sub-sectors complained the most about competition from imported goods.

Cost and competitive pressures also differed among the sub-sectors. For example there existed pockets of small scale and informal producers in the furniture and wood sub-sector and the aluminum manufactures within the metal works sub-sector whose activities were more likely to have had a negative impact on growth. The initial cost of entry into these sub-sectors was relatively low, hence the wide spread of informal activities.

Table 3.16: Analysis of Sales Growth by Sector

Sector	High Growth		Growth		Stable		Decline		Total
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms
Wood Processing	0	0	3	100	0	0	0	0	**3**
Metal	2	67	1	33	0	0	0	0	**3**
Food Processing	3	100	0	0	0	0	0	0	**3**
Paper & Printing	1	33	2	67	0	0	0	0	**3**
Plastics & Rubber	1	33	1	33	1	33	0	0	**3**
Total	**7**		**7**		**1**		**0**		**15**

3.5.4.2 Location

All the firms interviewed were located in Accra the capital city except one located in Tema and the other located in Kumasi. With the exception of one firm all the firms placed a high importance on location (albeit varied reasons). Some of the firms reported that location in industrial areas offered them constant supply of electricity, water, and telephone. These facilities were less likely to be interrupted in the industrial areas. Other firms reported of the externalities generated by firms located in the industrial areas.

Most of the firms reported that the choice of location was based on demand. One firm located close to Mokola (the biggest market in Ghana) commented as follows:

"*Location is a great factor in our growth. In fact we are gifted in getting a place around this area. Our delivery van can go to the market five (5) times a day; the manufactures from other places make less than two trips in a day. It takes the market women to walk here for their goods.*"

3.5.4.3 Size

The evidence from the exploratory research was that larger firms tended to grow faster. This could be explained by the fact that most of the small firms lacked the resources such as financial, managerial and technology required to effect growth. Some of the firms started with a small production capacity that limited their ability to grow even where there was subsequent increased in demand.

Some owner managers had the attitude of remaining small in order not to attract the attention of the authorities for political and/or regulatory reasons. For some owner/managers growing the business beyond a certain size could lead to payment of taxes that could be avoided by remaining small. The following was the comment from one respondent:

"When the business becomes big the government focuses on you for more taxes."

There was also the argument that large firms were more likely to have the influence to lobby authorities for special treatment such as tax exemptions. However, it was found that some of the small firms were collaborating either with their counter parts or with the large ones to seek for regulatory amendments.

The smaller firms tended to be younger. For example four out of the five small firms were aged between four and ten years, while all the large firms had existed for more than ten years.

3.5.4.4 Age of the Firm

The age of the firm was observed to have an inverse relationship with growth. For example four out of the five high growth firms were aged between 4 and 10 years. One reason likely to have affected the growth of the older firms was effective management to deal with the complexities of growth. In most of the sampled firms management was effectively in control of one person with no clear succession plans. Whilst initially the owner/managers might have been aggressive in growing their businesses over time such posture reduced and with no one to ensure growth the firms declined in size. This was evident in the comment by one of the respondents:

"The next stage will be for my children. They will have to grow it further, which is the only goal I have now, because everything I wanted to achieve I have done it."

The lack of an effective succession plan, coupled with the general perception of difficulties in inheritance, growth rate could be reduced when the original owner/manager passes away.

3.5.4.5 The Number of Owners

As shown in Table 3.17 below, 11 (73 percent) out of the 15 sampled firms had more than one shareholder. However, we observed that in 9 (82 percent) of these firms the decision making process was entirely in the hands of one person.

We also found that 8 (73 percent) of the firms with multiple ownerships were family owned, of which 5 firms were owned by spouses. Most of the Ghanaian family businesses were owned and managed by one spouse or both spouses. The use of an immediate family member as the second important decision maker, in most cases was not based on competence, but rather based on trust.

Even those respondents who were prepared to admit new shareholders were divided on the structure it should take. While some would like to have strategic partners who were expected to bring in additional capital and management expertise, others intended to float shares on the stock exchange to raise more capital. Three (75 percent) of 4 firms that expressed no intention to allow for further share ownership were owned by immigrants. According to these owner/managers, they could easily access credit within the Ghanaian financial system.

Table 3.17: Analysis of No. of Owners

No. of Owners	No. of Firms	Percentage
1	4	27
2	7	47
3	3	20
4	1	6
Total	**15**	**100**

Most of the respondents pointed out that due to the general lack of trust within the Ghanaian society entrepreneurs were unwilling to establish joint ventures. They also complained about the lack of an adequate legal system to deal with business disputes in a timely manner. Whilst one respondent reported the breakup with her partner due to lack of

trust, another respondent was of the view that their business was suffering from non-cooperation between the two shareholders.

3.5.5 The External Environment and Constraints

In the previous sections we focused on the factors internal to the small firm, in this section we take a look at factors that were external but yet fostered or impeded growth within the small firms. The major issues that came out of the exploratory research are reported below.

3.5.5.1 Contract Enforcement

One of the most important and widely reported factors constraining growth according to the respondents was delay in the payment of their invoices. The economy of Ghana like many developing countries is highly dependent on the state. During the studied period it was reported that the government delayed in the settlement of its bills. This directly and or indirectly affected the private sector growth.

The severity of the problem appeared to be dependent on the size of a firm. The smaller firms suffered the most. Firms that did not have the financial capacity to deal with the long delayed in the payment of their invoices, lost sales as they were unable to accept state related businesses or had little cash to turn their production around.

The private sector was also cited as having the tendency of delaying payments. The lack of an efficient court system was cited as one of the reasons that reinforced this kind of behavior within the business community. Below was a comment from a respondent.

"In this country (Ghana) people dishonor cheques and nothing happens to them. Even the Central Bank sometimes refuses to honor government cheques. What can the business community do?"

3.5.5.2 Financial Constraints

The other most widely mentioned constraints were access to and cost of credit. The importance of their effects depended on the size of a firm and its age.

The smaller firms viewed the credit system as discriminating against them. They noted that most of the financial institutions viewed the smaller businesses as too risky. This did not only affect access to credit but borrowing cost as well. Preferential access to credit existed mainly due to scarcity of private sector credit, lack of existence of adequate information and ineffective judicial system. These factors increased the difficulties that the financial institutions encountered in debt recovery processes.

The older firms complained less about access to credit. The reason might have been that the older firms had good track records and stronger relationships with the financial institutions.

Cost of borrowing was considered as a very important impediment to growth by all firms including those firms with relatively easy access to credit.

3.5.5.3 Demand

The lack of demand was cited as a factor constraining growth of small firms in Ghana. It was argued that low purchasing power affected a large portion of the population; hence firms producing high quality products tended to suffer more. Firms that produced low priced products and served the lower end of the market were more likely to grow faster. The smaller firms were less likely to adopt a large scale production method, because they lacked adequate resources.

Some of the large firms also complained about the lack of demand because they produced below capacity. Some of the smaller firms adopted market niche strategy which made them successful.

Lack of demand also appeared to be sector related. Firms in the furniture and wood, and food processing complained most and those in the plastics complained the least.

Lack of demand was compounded by the trade liberalization policy, which allowed the importation of various finished goods into Ghana. The argument was that most of the firms in Ghana were so small and lacked the required resources; hence they were less efficient compared to their counterparts in the developed or the Asian countries.

3.5.5.4 Other Constraints

Other factors that were mentioned as constraining the growth of these small firms included, inefficient state institutions, high and inefficient tax system, lack of regulation to deal with quality standards, lack of proper legal system to deal with business disputes and lack of transparency within the business community and the state organizations.

3.6: Conclusion

The characteristics of the owner/manager were found to be the most important factors driving the growth of these small firms. In most of these firms the decision making process was firmly controlled by the owner/managers. Firms that were export oriented tended to be larger but showed no clear evidence that they grew faster. There was a mixed reaction as to how product quality affected growth, whilst some firms preferred to produce low cost standardized products, firms with market niche produced high quality customized items as a growth strategy.

Most of the firms used old and inefficient technology that affected growth. Firms with effective distribution network appeared to grow faster and tended to be larger. Firm size was found to be positively related with growth. Among the constraints that affected growth were; low demand, lack of contract enforcement, lack of access to and cost of credit, and inefficient state institutions.

The exploratory research has increased our knowledge and understanding of the factors that led to the growth of the small firms in Ghana during the studied period. We therefore combined this understanding with that obtained from the review of existing literature on small firm growth in developing our research hypotheses and model in the next chapter.

Chapter Four

Research Model, Questions and Hypotheses Development

4.1 Introduction

In chapter two we carried out a review of existing literature on small firm growth, which was followed by the analysis of results of the exploratory research in chapter three. Undoubtedly, these chapters have increased our theoretical understanding of factors that generally affect small firm growth in LDCs in general and Ghana in particular. Following these the model upon which the research is based is developed and explained in this chapter. In addition the relevant research questions are restated and hypotheses developed.

4.2 The Research Model

The main purpose of the research is to develop an explanatory framework that will lead to a better understanding of small firm growth in LDCs by examining the influence of factors internal to the organization and external environment impacting on small firm growth by using data from Ghana.

The framework in particular is influenced by the works of Storey (1994): (Characteristics of the Entrepreneur, Characteristics of the Firm, and Business Strategy), and Chamanski and Waago (2003): (External Environment).

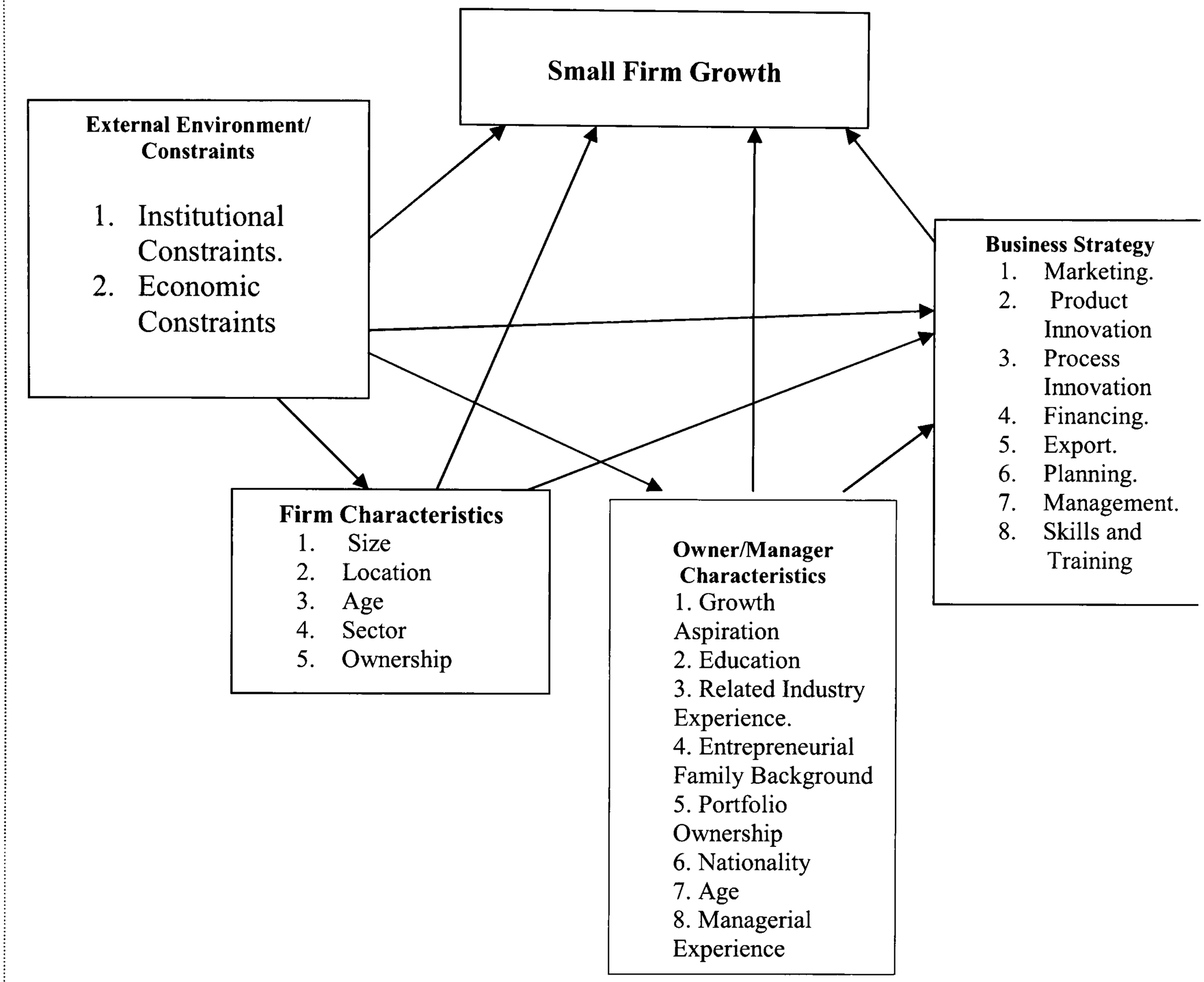
The framework considers the interdependency among the explanatory factors. The importance of addressing the issue of indirect effects when modeling small firm growth factors is well highlighted (Barkham et al 1996, Storey 1994, Chamanski and Waago 2003, Wiklund 1998).

The relationship between strategy and the characteristics of the external environment within which the firm operates is well documented (Aldrich and Pfeffer 1976, Pelham 1999, Dess and Keats 1987, Porter 1980, Marsden and Forbes 2003, Smallbone and Wyer

2000, Chamanski and Waago 2003, Jennings and Beaver 1997). There exists the argument that the success of a firm's strategy is dependent on the degree of alignment of the firm's business and its environment (Dess and Keats 1987, Marsden and Forbes 2003). This argument is based on the premise that small firms lack the required resources to predict and control the environment but only needs to adapt to the operating environment and devising tactics for mitigating the consequences of any threatening changes that may occur (Marsden and Forbes, 2003).

A contrary view is held by 'strategic choice' paradigm, which argues that managers most often have enough power and latitude to make strategic choice (Pelham 1999, Chamanski and Waago 2003, Wiklund 1998). The entrepreneurial characteristics (e.g. prior managerial experience, educational background, family background, overseas experience) as well as the context within which the firm operates (e.g. the period of growth and the type of industry) usually affect the kind of strategic decisions that the owner/manager adopts (Oslon and Bokor 1995, Barkham et al 1996). The entrepreneurial characteristics determine the goals of the firm and, the strategic options at the firm's disposal (Barkham et al 1996).

Figure 4.1: Proposed Small Firm Growth Model in LDCs



4.3: The Main Research Question:

The research is mainly based on the question: *What are the significant factors that influence growth of small firms in LDCs?* To answer this question requires an investigation into a wide range of factors that are suspected to impact on growth and the development of sub-research questions. Following the works of previous researchers (Storey 1994, Barkham et al 1996, Bridge et al 2003, Chamanski and Waago 2003) these factors are

grouped as follows: Owner/manager Characteristics, Firm Characteristics, Business Strategy and External Environment/Constraints.

We restate below the definition of growth used for this research (see chapter 5), which is followed by the sub-research questions that have been developed under their various subheadings.

Growth Category	**Growth Indicator**
High Growth	Firms that at least doubled the number of employees over the study period.
Growers	Firms that increased the number of employees by more than 20 % but not exceeding 99 %.
Stable Firms	Firms that increased the number of employees by not more than 20 %.
Decliners	Firms that recorded negative growth rate.

4.4.0: The Owner/Manager Characteristics

The importance of the characteristics of the owner/manager to the growth of small firm is generally accepted (Storey 1994, Barkham et al 1996, Chamanski and Waago 2003, Pelham 1999, Smallbone et al 1993) and may not require further debate. However, what remains unresolved is the direction and the degree of impact that each of the varied characteristics of the owner/manager has on growth. This leads to the first sub-research question:

Which of the characteristics of the owner/manager have significant impacts on small firm growth in LDCs?

To answer this question effectively, some of the owner/manager characteristics that became prominent out of the literature review and the exploratory research and included in the research model as shown in Figure 4.1 are discussed below.

4.4.1: Growth Aspiration

The objectives of the owner/manager are considered as important factors that need to be examined so as to throw more light on the overall motivation of the owner/manager (Barkham et al 1996). The writers further argue that growth is not an automatic response to market conditions, but for growth to occur the owner/manager has to pursue it as an objective.

In small firms ownership is mostly combined with management in the hands of one or few individuals, who determine(s) the future growth based on factors like personal lifestyle, family consideration among others (Barkham et al 1996). It is reasonable to assume that the motivation to grow is likely to be pursued by all entrepreneurs. However, for many small business owners growth is not an objective (Smallbone et al 1993, Orser et al 2000, Smallbone and Wyer 2001, Bridge et al 2003, Barkham et al 1996, Wiklund and Shepherd 2003, Morrison et al 2003).

It can be argued that most owner/ managers of small firms in LDCs will not seek growth so as to avoid recognition by the authorities (Goedhuys and Sleuwaegen 1999, McPherson 1996, Smallbone and Welter 2003, Liedholm 2002). Heavy regulation and frequent political persecution of entrepreneurs are cited as some of the reasons that give rise to this situation.

Political and macro-economic instability fuel entrepreneurs' intentions to seek riches quickly in LDCs, such entrepreneurs are less interested in growth as an objective. The uncertainties again give rise to entrepreneurs being more interested in trading activities than in manufacturing. This is because manufacturing activities normally require relatively high fixed costs reducing the chances of exit. With the high level of unemployment it is expected that many people will rather be pushed into entrepreneurship and in line with many findings these people are less likely to seek growth as an objective (Holmes and Gibson 2001, Chell et al 1991, Bridge et al 2003).

It is therefore our expectation that the objectives and growth intention of the owner/manager will be significant factors in determining small firm growth in LDCs.

This leads to the hypothesis that:

(H1A) Growth is positively and significantly influenced by the fact that a firm is managed by an owner/manager with higher growth aspiration.

4.4.2: Human Capital (Education and Related Experience)

Storey (1994) puts forward two conflicting roles that the level of education of the owner/manager can play in the growth of small firms. Firstly, he argues that education has positive effect on growth as it enhances the management resources of the firm. It also provides higher level of confidence to the owner/manager in dealing with outsiders, and affects the level of motivation through higher earning expectation. Wiklund and Shepherd (2003) also argue that growth though increases with aspirations but at a faster rate for those owner/managers with higher levels of education.

Storey's (1994), second and opposite argument is that small business ownership is of less intellectual activity, which is available to those having less academic standing to take opportunity to raise their incomes.

In Ghana, like many LDCs, entrepreneurship was in the past mainly left in the hands of the less educated individuals. The highly educated people preferred working within the state organizations which have less to offer in terms of entrepreneurship. As the opportunities offered by these state institutions in terms of new engagements and remuneration continue to decline, more highly educated people have turned to entrepreneurship. This is expected to give rise to a more competitive environment, which will require an enhancement in management ability to achieve growth.

The perception of most owner/managers interviewed during the exploratory research confirms the position that the level of education plays a significant role in small firm

growth in Ghana. Owner/managers with higher level of education are expected to have in place a more structured management team that can adequately deal with the macro-economic instability in the country.

In their analysis of human capital and its impact on small firm growth Wiklund and Shepherd (2003) make a distinction between general and specific human capital. They argue that specific human capital relates to the skills and knowledge of conditions that assist in the management and the organization of the firm to achieve growth.

Certain specific human capital namely start-up experience, management experience and experience in working in high growth firms have been found to be positively associated with the growth of small firm (Wiklund and Shepherd 2003, Storey 1994).

Storey (1994) contends that prior experience of managerial tasks enhances the small firm owner/manager's managerial skills that lead to easy implementation of ideas to achieve higher growth. He also notes that an experienced manager is more likely to set a higher wage goal that requires high growth to attain.

Smallbone and Welter (2001) however, raise concerns about the nature of the managerial experience that managers obtain and how such experience can impact on small firm growth in transition economies. They argue that more often than not, prior managerial experience is obtained in state-owned institutions rather than the market driven environment. They conclude that the previous managerial experience obtained in the state-owned institutions is less likely to be suitable and adequate to prepare an owner/manager of small firm to achieve growth. These arguments are likely to be applicable to LDCs where state-owned institutions were/are dominant employers. In these economies it is therefore important to clearly distinguish managerial experience obtained in market related environments or otherwise. Higher level of education was found to be positively related to growth, while there was no direct link between prior industry experience and growth at the exploratory research stage (see sections 3.5.2.4 and 3.5.2.6).

These therefore lead to the hypothesis:

(H1B i). The level of education of the owner/manager is expected to have a significant and positive relationship with growth.

(H1B ii). Prior related industry experience is expected to have a significant and positive relationship with growth.

4.4.3: Family Experience and Support

According to Storey (1994) and Smallbone and Welter (2001), individuals whose parents are or were business owners are more and significantly likely to become business owners themselves for various reasons. Firstly, they could benefit from their parents experience and expertise. They may also have easier access to resources either directly from their parents or as a result of the goodwill that the family may be having within the business community.

In the Ghanaian environment the family concept is still perceived to be strong. It is therefore important to test the extent to which family support such as family financing, employment and advice impact on small firm growth. The initial finding of the exploratory research is that many small firm owners in Ghana prefer joint ownership with family members specially their spouses rather than with outsiders. This may be due to the fact that in the case of family relationship the 'glue' is thicker with longer history of shared relationship (Fletcher, 2000). The overall finding of the exploratory research was entrepreneurial family background had a direct link with growth (see section 3.5.2.7).

We test the hypothesis that:

H (1C) Growth is positively and significantly influenced by an entrepreneurial family background (i.e. firm managed by owner/manager who has a family entrepreneurial experience is more likely to achieve higher growth).

4.4.4: Portfolio Ownership

Portfolio ownership is considered to be associated with growth-oriented firms. This is based on the argument that portfolio ownership is a sign of entrepreneurial flair and tends to reduce risk as well as offering networking benefits (Smallbone and Wyer 2000, Bridge et al 2003, Barkham et al 1996).

It was however, evident at the exploratory research that many small firms in Ghana are less likely to have a structured and effective management team. In such firms owner/managers' management time will be at least a major constraint even if such owner/managers have other capabilities and resources to engage in other businesses. It is also perceived that most owner/managers with more than one business shift resources from one firm to the other to avoid payment of taxes or honoring of loan obligations. This can negatively affect their chances of receiving support from financial institutions. Our view is that portfolio ownership is less likely to lead to growth not withstanding its associated benefits. This is supported by the exploratory finding (see section 3.5.2.2).

This lead to the hypothesis that:

H (1D) Growth is negatively and significantly influenced by the fact that the owner/manager owns several firms.

4.4.5: Nationality

According to Kilby (1983) in developing countries, firms that are owned and managed by people of minority ethnic background (especially in Africa, non-Africans) tend to grow faster. The explanations given are that the minority entrepreneurs tend to have superior initial endowment of capital, technology and knowledge of the markets. Other external factors such as limited occupational choice, high level of threat of expulsion, respect for cooperation with other minority business owners are also mentioned. These minority

business owners also build strong network system that allows them easy access to resources Kilby (1983) concludes.

The above findings are in agreement with those of our exploratory research. For example we found that firms owned by immigrants were perceived to be favored generally by the authorities as they feel more secured when dealing with foreigners in a less transparent manner. Foreign owner/managers are again perceived to be more committed to the growth of their business than the indigenous owner/managers (see section 3.5.2.3).

This leads to the hypothesis that:

H (1E) Growth is positively and significantly influenced by the fact that the owner/manager is an immigrant.

4.5.0: Firm Characteristics

The characteristics of the firm, though they may be a reflection of the entrepreneur's characteristics, differ for the reason that the former is based on decisions made by the owner either during or after the commencement of the business (Smallbone and Wyer 2000, Storey 1994). The four most potential firm characteristic factors that have been pointed out by researchers being: firm size, sector (Barkham et al 1996), age and ownership (Storey 1994) will be investigated.

This leads to the second sub-research question:

What are the major characteristics of the firm that impact on small firm growth in LDCs?

4.5.1: Sector

The impact of sector on small firm growth has been adequately highlighted in the developed countries (Storey 1994, Bridge et al 2003, Andersson 2003, Davidsson et al 2002, Stokes 1998). Bridge et al (2003) for example note that the average growth rate of firms is higher in some sectors than others. According to Baah-Nuakoh (2003) the

differentials in the performance of firms within the manufacturing sector in Ghana can be attributed to an uneven effect of foreign competition and dependence on imported inputs. Sectoral growth pattern may be a reflection of uncertainties in the macroeconomic environment that may favor short-term investments in sectors with a high profit level and low barriers of entry and exit (Welter and Smallbone, 2003). The initial exploratory finding was that growth rates differed among the sub-sectors (see section 3.5.4.1).

This leads to the hypothesis that:

H (2A). Growth is influenced by the sector within which a firm operates (e.g. firms operating within the metal sub-sector will show the highest growth rate).

4.5.2: Firm Size

The relationship between firm size and growth has been widely studied with varied results. According 'Gibrat's Law' or the Law of Proportion Effect, firm growth is independent of size.

There are others who argue that small firms grow faster than large firms (Evans 1987a, Evans 1987b, Audretsech 1995, Jovanovic 1982, Hall 1987, Dunne and Hughes 1990). Barkham et al (1996) provide a number of reasons to support this proposition. Firstly, small firms tend to be more flexible than their large counterparts. Secondly, large firms suffer from too many competing interests affecting their ability to grow. Thirdly, small firms tend to operate within a niche market to avoid direct competition. Finally, it is highly impossible for firms to increase size at the same growth rate for ever. According to Bridge et al (2003) it is not uncommon to see many firms growing quickly in their early years to reach their maximum efficient level, and then subsequently reach a plateau.

It can however, be argued that in most LDCs the growth rate of small firms will be lower than that found in the advanced countries. This is because most small firms suffer from high regulatory system. Small firms will rather prefer to remain small so as to avoid taxes

(Sleuwaegen and Goedhuys 2002, Goedhuys and Sleuwaegen 1999, Tybout 1999, Smallbone and Welter 2001, De Soto 1989, Schmitt-Degenhardt et al 2002, Welter and Smallbone 2003).

We take a position with the latter argument which is supported by our exploratory research finding (see section 3.5.4.3) and test the hypothesis that.

H (2B). Growth is directly and significantly influenced by the size of a firm.

4.5.3: Firm Age

Younger firms are said to be more likely to achieve higher growth rate than older firms. This is based on the premise that younger firms tend to be more aggressive to reflect a high growth needed to achieve minimum efficient scale (Story 1994, Almus and Nerlinger 1999, Glancey 1998, Davidsson et al 2002, Wijewardena and Tibbits 999). It can also be argued that owner/managers motivation diminishes with the passage of time (Davidsson et al 2002, Storey 1994).

In the light of high credit constraint in Ghana, it is expected that younger firms are more likely to be discriminated against in credit provision for lack of a track record. This will therefore negatively affect the growth of these firms. On the other hand matured firms are considered to be more secure and can provide collateral security to attract financing (see section 3.5.4.4). These lead to the hypothesis that:

H. (2C) Growth is positively and significantly influenced by the age of a firm.

4.5.4: Shared Ownership

The argument exists that firms that are managed by multiple owners are likely to grow faster. The explanation given is that multi-owner teams offer complimentary skills and specialization in decision making that are most needed in growth oriented small firms (Barkham et al 1996, Storey 1994).

The exploratory research provides an insight into multi-ownership in small firms in Ghana. It was discovered that lack of trust and cooperation affect the decision making process of these firms. Founders therefore find it more beneficial to include their family members as part owners rather than outsiders who though may possess better skills and more financial and other resources (see section 3.5.4.5).

This leads to the hypothesis that:

H. (2D) Growth is negatively and significantly influenced by the fact that a firm has several owners (i.e. firms with multiple ownership are less likely to achieve high growth).

4.6.0: Business Strategy

In assessing the impact of strategy on small firm growth, the main focus will be centered on management actions taken once the firm is in operation in order to influence its environment. This is what Smallbone et al (1993) referred to as 'managed for growth.' The analysis is based on the work of Storey (1994) which reviewed areas of strategic management that impact on small firm growth. His work was found to be the most comprehensive in this area of small firm growth. According to Smallbone et al (1993) there is no single type of strategy which is associated with growth.

The third sub-research question being asked is:

What kind of business strategies adopted has a significant influence on small firm growth in LDCs?

4.6.1: Marketing Strategy

Though an effective marketing strategy is considered as an important factor impacting on small firm growth, many small firm owner/managers tend to pay less attention to it. The success of a small firm often requires the creation of a market for its products (Barkham et al 1996). It is further argued that, due to choice or awareness and resources, there is

varying degree of effort put into marketing activities by different owner/managers. Neshamba (undated) notes the strong relationship between marketing and growth. It has been noted that high growth firms no longer focus solely on increasing production and meeting customers' need but are constantly developing the ability to determine the needs of their buyers. It was observed at the exploratory stage that high marketing orientation lead to high growth (see section 3.5.3.5).

This leads to the hypothesis that:

H (3A). The level of importance placed on marketing activities will positively and significantly influence growth.

4.6.2: Product Innovation

In considering the effect of new product introduction on small firm growth, it is important to make a distinction between 'genuine innovation' and the introduction of an existing product in the range of products of the firm (Barkham et al 1996). In Ghana it is not expected that many small firms will be involved in 'genuine innovation' due mainly to the lack of resources to undertake such projects. The discussion below is therefore limited to introduction of existing product.

Smallbone et al (1993) note that, for some small firms operating in certain sectors product innovation is a requirement for high growth.

As argued by Barkham et al (1996) small firms introduce very few new products but can be good at adopting new products and making incremental improvements to those that they already produce. In Ghana it is common to see many small firms modifying products from elsewhere to make them suitable to the local conditions.

4.6.3: Process Innovation

Process innovation plays a major role for firms to remain competitive and foster growth. It is therefore important to enquire about the process innovation strategy of the firms that could lead to the enhancement of the firm manufacturing process. As noted by Barkham et al (1996) process innovation is undertaken with the prime aim of increasing productivity and or improving product quality. Sales growth was found to be directly associated with both product and process innovations, while employment growth was positively associated with product innovation but negatively associated with process innovation (see sections 3.5.3.2 and 3.5.3.3).

The following hypothesis is proposed in respect of innovation activities.

H (3B). The level of importance placed on innovative activities will positively and significantly influence growth. In particular firms that show importance to: (a) new product introduction or (b) improvements in existing products or (c) process innovation are more likely to achieve higher growth.

4.6.4: Export

In the light of perceived lack of demand arising from low purchasing power of the greater portion of the population in Ghana, it is expected that firms that intend to grow will look elsewhere to market their products. It can also be argued that as Ghana is surrounded by countries that are within the CFA zone, firms will choice to export to take advantage of the relative stability in the value of the CFA against the local currency.

Though no evidence was found during the exploratory research stage that exporters had a higher growth rate (see section 3.5.3.7), it is proposed that:

H (3C). Growth will be positively and significantly influenced by the fact that a firm is engaged in export.

4.6.5: Formal Planning

Following Storey (1994), formal planning is defined in terms of a written down plan of the firm, to cover a period not less than one year with the objectives of the firm and strategies to meet them clearly specified. The evidence to support the case for formal planning positively associated with small firm performance remains inconsistent and contradictory (Mazzarol 2005). Whilst some researchers support the position that formal planning impacts significantly and positively on small firm performance (Woo et al 1989). In the case of other researchers the association has been weak (Robinson and Pearce 1984). Storey (1994) also notes that the evidence as to whether planning is a factor that lead to growth, or that growth and expansion rather called for greater formality remains less clear. The view is however, taken that in the Ghanaian context there exists high environmental uncertainty which requires greater level of formal planning to be successful.

A hypothesis is therefore proposed as follows:

H (3D). Growth is positively and significantly influenced by the fact that a firm is engaged in formal planning.

4.6.6: Skills and Training

As noted by Foreman-Peck et al (2003), to sustain growth rate of small firms in a competitive environment requires that the firms concentrate in the development of their core competencies to continue to deliver what the market looks for. They further argue that nurturing firm-specific knowledge, skills and investing in training of the right choice will lead to growth. They conclude that management with growth intention are likely to invest in employees' skills to increase their productivity.

From the exploratory research it appeared that there exists lack of skilled labor in Ghana. It is important to note that the skills of a large portion of the Ghanaian labor force were acquired through state related institutions that may not be adequate for competitive market

environment. This therefore increases the need for retraining within competitive market structures, to achieve higher growth.

This leads to the hypothesis that:

H (3E): Growth is positively and significantly influenced by the fact that a firm is engaged in training and skills development of employees.

4.7.0: The External Environment- Constraints to Growth

The impact of the external environment and the unpredictable nature of how such factors emerge are seen as providing the pace at which small firms grow (Smallbone and Wyer, 2000). The writers explain that for engaging in a narrower range of activities, employing fewer skilled personnel and serving a single market as well as having less resources, changes in the external environment are more likely to have greater impact on the small firms than their larger counterparts. The external environment is said to play an important role in shaping owner/managers' intentions to grow and develop their firms (Liao et al undated, Smallbone and Wyer 2000, Goedhuys and Sleuwaegen 1999).

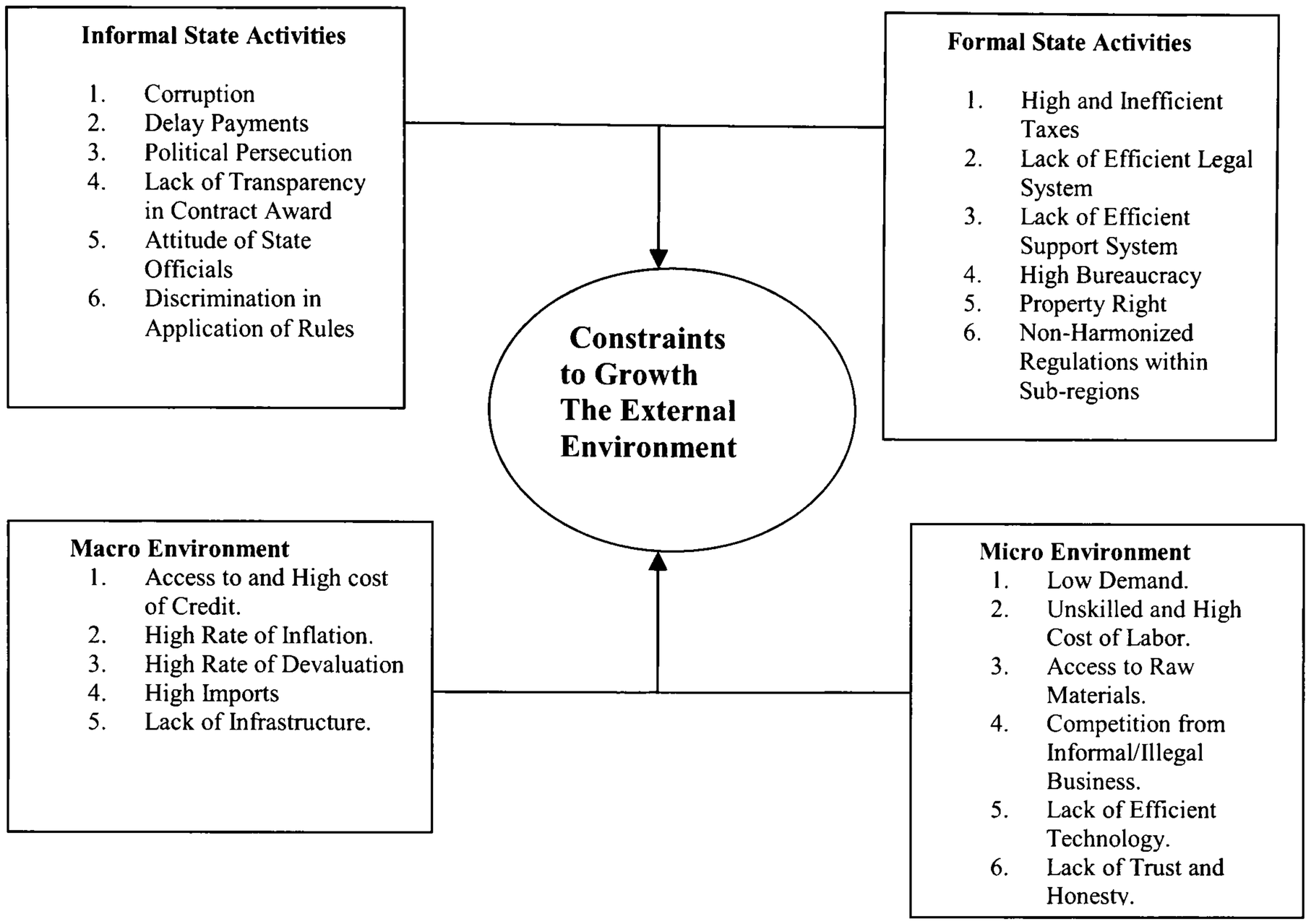
Therefore the next sub-research questions being asked are:

To what extent does the external environment impact on growth?

What are the major factors that constraint growth of small firms in LDCs?

In accessing the impact on the external environment on growth, the barriers to growth perspective is used. This is found to be popular among researchers (Story 1994, Barkham et al 1996, Baah-Nuakoh 2003, Trulsson 2002, Brown et al 2003, Bartleet and Bukvic 2001, Goedhuys and Sleuwaegen 1999) and will therefore allow for easier comparison of results.

Figure 4.2: Proposed Model of Constraints to Growth for Small Firms in LDCs



Following the exploratory research and review of existing literature the main issues on constraints to growth will be investigated under the categories: Institutional barriers (Informal and Formal) and Economic environmental barriers (Macro and Micro). Figure 4.2 above shows a proposed model of the external environment on small firm growth in LDCs.

4.7.1: Institutional Barriers

According to institutional economists the existence of institutions affects the behavior of members of a society and the expected behavior of others, as well as governing activities that are carried out by firms (Frances 2004, North 1990). Institutional structures within a

country therefore impact on firm growth (Barlett and Bukiv 2001, Aidis 2003, Frances 2004, North 1990).

Institutional framework can be divided into two groups being formal and informal institutions. Formal institutions are the visible 'rules of the game' including laws and the lower forms of regulations that seek to restrict the activities of the society in general (North 1990). These rules which are generally developed and enforced by governments can easily be changed (Aidis, 2003).

Formal institutions, according to Frances (2004) provide the context within which firms operate. An unsuitable tax system has been identified as representing a severe burden on the growth of small firms and encourage entrepreneurs to shift some or all their activities to the informal economy (Barlett and Bukiv 2001, Aidis 2003, Chandra et al 2001, Smallbone and Welter 2001, Welter and Smallbone 2003). The existence of effective property rights and contract enforcement as Frances (2004) and Welter and Smallbone (2003) note, improve the environment for economic activity by reducing the transaction costs that firms face. Again property rights provide the protection of assets held by an individual or firm against expropriation by others. Such security serves as a motivator for people to invest in themselves and in physical capital, as well as providing firms with the confidence to invest in human capital, all to ensure growth.

In Ghana, expropriations of private assets by the state during the various military regimes were rampant. These though have ceased with the coming into force of the constitutional rule in 1992, many entrepreneurs; however, hold the perception that these can re-occur forcing firm owners to concentrate on how to survive.

Tybout (1998) argues that manufacturing firms in developing countries are subject to heavy regulation, much of which are biased against small firms and preventing such firms from experiencing growth. Baah-Nuakoh (2003), reports that in Ghana more than a decade of pursuing stabilization and structural adjustment programs firms continue to complain

about the complexity and limited transparency of the legal and administrative frameworks in place. The quality of court system, the affordability and consistency of courts, enforcement of court decisions and confidence in the legal system are significant predictors of constraints on firm growth (Beck et al 2002). The low public sector salaries together with lack of education and training opportunities prevent the proper implementation of legal rules (Welter and Smallbone 2003).

Informal rules on the other hand are the invisible 'rules of the game' that are made up of conventions, norms, values, and acceptable behaviors, as well as codes of conduct and individuals standards of honesty (North 1990, Aidis 2003, Frances 2004, Welter and Smallbone 2003).

Bartlett and Bukvic (2001) argue that growth of firms slows down as a result of uncertainty arising from unofficial institutions of the grey economy, and the uncertain effects of interest group lobbying to influence regulatory outcomes. They further note that these uncertainties increase transaction costs of carrying business with further consequences of reducing growth.

The detrimental effect of corruption on firm growth is widely supported (Bartlett and Bukvic 2001, Aidis 2003, Fisman and Svensson 2002, Kaufmann and Shleifer 1998, Wei 2001). The effect of corruption is said to be even more damaging than that of taxation, because of the uncertainty and secrecy that normally accompany bribery payments as well as lack of enforcement of such implicit contracts in the law courts (Wei 2001, Sheifer and Vishny 1993). Corruption is also considered to be impacting highly and disproportionately on small firms than the large firms for the reason that small firms lack the resources to withstand its financial implications (Bartlett and Bukvic 2001, Aidis 2003).

Other informal state activities such as lack of transparency in contract award, discrimination in the application of rules and delay payments are all considered to negatively affect small firm growth.

4.7.2: Macro Environment

The macro-environment consists of factors that tend to affect small firms on national bases (Stokes, 2000). A stable macro-economic environment promotes the development of small firms. This is even more important given that small firms are more vulnerable to the effect of any economic instability. Small firms tend to have low capital base and less competent management team to effectively deal with unexpected shocks.

For many small firms the main source of initial funding comes from personal and family savings (Storey 1994, Baah-Nuakoh 2003, Cook and Nixson 2000, Surdej 2000). It is argued that in Ghana over 78 percent of entrepreneurs sampled irrespective of size use their own savings to start their firms (Baah-Nuakoh, 2003). This is considered as a major impediment to the growth of small firms, particularly in their early stage of development (Pissarides, 1998). The severity of the problem of access to credit is considered to be inversely related to firm size. This can be explained by the fact that small firms are less likely to have the collateral security to support debt financing, and do have greater information problem (Baah-Nuakoh 2003, Brown et al 2004, Pissarides, 1998).

Cost of borrowing tends to be higher for small firms for the same reasons stated above. The high dependence on internal sources of funding for many small firms tends to limit their growth potential.

The trade liberalization policies implemented since 1984 in the West African sub-region has resulted in the flooding of the regional and local markets with cheaper imports, some of which are simply dumped (Olukoshi, 2001).

4.7.3: Micro Environment

According to Frances (2004), the most effective way to avoid malfeasance is to deal with people that one can trust. It was further argued that repeated transaction is based on reputation that ensures honesty in business deals, rather than on existing legal system.

Resolving conflicts through informal mechanisms tends to be better than resorting to law courts; however this must be based on mutual trust and honesty (Frances, 2004). In a nutshell it can be deduced from Frances (2004) that the existence of trust among entrepreneurs will lead to a reduction in transaction cost, which enhances firm growth.

From the exploratory research we found that there exists a high level of mistrust within the business environment, which requires further investigation. Many owner/managers interviewed did not appear to trust their subordinates reducing the level of delegation within the firms. These owner/managers are not motivated to seek growth beyond what they can personally handle. Lack of trust can be detrimental to networking among the small firms. Trust most often than not plays an important role in developing customer long term relationship.

The existence of rather high level of informal activities in many developing countries (Kuchta-Helbling et al 2000, de Soto 1989) poses a treat to the development and growth of small firms which operate within the formal sector of the economy. Kuchta-Helbling et al (2000) argue that higher transaction costs affect the degree of competitiveness of formal businesses as compared with their informal counterparts. This is because the latter do not pay taxes and do not comply with regulations which provide them with an unfair competitive advantage. It is expected that the extent to which informal activities impact on firm growth will be sector dependent. As noted by Kuchta-Helbling et al (2000) the informal sector is operated by independent, self-employed people normally engage family members whose activities require little or no capital. Certain sectors such as wood processing and metal works are less capital intensive. It is expected that the activities of informal producers will be high in these sectors.

The availability of relevant human skills and appropriately priced are considered be critical in small firm growth. Though labor is considered to be relatively abundant in Ghana, skills

according to most owner/managers interviewed are considered to be low, leading to high training requirements and low productivity.

4.8: Culture

To advance the development of small business field Gibb (2000) advocates for the transfer of ideas internationally, but points out that the issue of transfer of knowledge is constraint by cultural differences. Curran (2000) referring to enterprise culture as encompassing, integrating view of the world with related behavioral ways of life shared by a specified group of people, considers cultural issues to be central in the small business research. Curran (2000) further argues that small enterprises often appear similar in different countries but have key differences in their institutionalized forms due, to say differences in ethnicity, owner-manager attitudes, employer-employee relations, customer attitudes etc. According to Curran (2000) small firm theories and models have been developed based on the western cultures that may not be applicable within other cultural settings. The interplay between environment and culture needs to be taken into consideration when attempting to understand the practices of small firms (Siu et al, 2003).

Cultural attitudes are considered as important factors that can affect small firm growth in our data set. Some of the cultural issues that were observed during the exploratory research are therefore stated below.

Indigenous entrepreneurs are less valued. Success is normally associated with cheating, corruption and illegal drug trafficking.

- Entrepreneurship is regarded as highly individualistic self-seeking activity.
- Successful people tend to be pulled down as a result of envy.
- Business failure is frown upon.
- Alien entrepreneurs are more highly regarded and trusted than the indigenous entrepreneurs.

- People strongly rely on government for solution to all problems.
- Firms that become successful within certain political era are seen as having directly benefited from the political powers at the time.
- Employees often have a higher regard for their alien supervisors than their indigenous counterparts.
- Imported products are perceived to be of higher quality and are more likely to be accepted than locally produced products.

4.9: Summary and Conclusion

In this chapter we proposed a model that offers an explanation of small firm growth in LDCs. The proposed model in the main grouped factors into four categories being: those factors arising from the owner/manager's characteristics, those relating to the characteristics of the firm, the impact on growth arising from the business strategies that are pursued by management and finally the effects of the external environment on growth.

Various research hypotheses have been developed based on existing literature and the findings of the exploratory research. These hypotheses are expected to assist in answering the main question and the sub-research questions.

The proposed research model and the hypotheses relating to the characteristics of the owner/manager are based on issues such as: the owner's growth aspiration, age, education, experiences, nationality and family background.

The main characteristics of the firm that are expected to influence growth in LDCs and to be investigated are: firm size, sector, age and ownership.

Business strategy issues have been centered on marketing, product and process innovation, business planning, export and staff training.

Using the barriers to growth perspective to analyze the impact of the external environment on growth, twenty one barriers expected to affect growth have been identified and to be

tested. The barriers to growth have been divided into institutional (formal and informal) and economic (macro and micro) factors. The perception of owner/managers regarding the significance of these barriers to growth will be sought.

In the next chapter we discuss the research methodology, design and procedures that will allow for an effective testing of the hypotheses and the confirmation or otherwise of the research model.

Chapter Five

Research Methodology, Design and Procedures

5.1: Introduction

In the previous chapters the theoretical background underpinning small firm growth was developed through a review of existing literature (chapter 2). Qualitative interviews were also conducted, which aimed at providing further understanding of issues relating to small firm growth with particular reference to the manufacturing sector in Ghana (see chapter 3). The two procedures together led to the development of the research hypotheses (see chapter 4). In this chapter we present the research methodology, process and approach that will allow for the testing of the research hypotheses. In particular the research paradigm applied is discussed as well as the definition of small firm used, data source, sampling procedures, and data collection method and procedures. Other issues discussed include response and non-response analysis, questionnaire development and the statistical methods to be used to analyze the survey data obtained.

5.2.0: Research Paradigms

Philosophers of science and methodologists have been engaged in a long-standing epistemological debate about how best to conduct research, with two fundamentally different and competing schools of thought or inquiry paradigms emerging (Amaratunga et al, 2002). Different paradigms which in social sciences help to understand phenomena (Creswell, 1994) are seen by Kuhn (1962) to be incommensurable.

Table 5.1: Two Research Paradigms

Approach	Concepts	Methods
Positivism	Social structure Social Facts	Quantitative Hypothesis/ Theory testing
Phenomenology	Social construction Meanings	Qualitative Hypothesis/ Theory generation

Source: Silverman (1998), page 123.

Table 5.1 above sets out an overview of the two main paradigms.

Data is interpreted differently by those working in different paradigms (Hill and McGowan, 1999). Gummesson, (1991) defines paradigm as a world view representing people's value judgments, norms, standards, frames of reference, perspectives, ideologies, myths, theories, and so forth.

5.2.1: Positivism

Positivism which uses quantitative and experimental methods to test hypothetical-deductive generalizations, advocates for independence of the observer from the subject being observed (Amaratunga et al 2002, Smith 2002, Gill and Johnson 1991). It assumes that science quantitatively measures independence facts about a single apprehensible reality, data and its analysis are seen to be value-free (Healy and Perry 2000, Guba and Lincoln 1994). Positivist epistemology tries to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements, and has its root from natural science (Burrell and Morgan, 1979).

5.2.2: Phenomenology

On the other hand interpretative or phenomenological approaches rejecting the positivist's over-deterministic orientation towards an understanding of human action and behavior, argue that, unlike animals or physical objects, human beings are able to attach meaning to the events and phenomena that surround them, and from these interpretations and

perceptions select courses of meaningful action which they are able to reflect upon and monitor (Gill and Johnson, 1991). Phenomenological inquiry therefore uses qualitative and naturalistic approaches to inductively and holistically understand human experience in context-specific settings, aimed at understanding and explaining a phenomenon, rather than search for external causes or fundamental laws (Amaratunga et al, 2002).

Amaratunga et al (2002) further argue that in designing a research the issue is not whether one has uniformly adhered to prescribed canons of either positivism or phenomenology but whether one has made sensible methods decisions, in the light of the purpose of the study, the questions being investigated, and the resources available. Different methods are therefore appropriate or inappropriate for different situations.

5.3.0: Quantitative and Qualitative Methodologies

In order to appreciate how the choices of a methodology affects small firm research it is important to define research methodology and to put it into perspective. Robson (2002) defines methodology as the theoretical, political and philosophical backgrounds to social research and their implications for research practice, and for the use of particular research methods.

Various factors influence the choice of different approaches including the nature and content of the research problem and the available resources (Gill and Johnson, 1991).

Table 5. 2: Key Features of Positivist and Phenomenological Paradigms

Criterion	Quantitative	Qualitative	Implication For Small Firm Research	
			Quantitative	**Qualitative**
Reality is …	Objective out there to be found Perceived through the senses. Perceived uniformly by all. Governed by Universal Laws. Based on Integration.	Subjective in people's mind Created, not found Interpreted differently by people.	The role of the owner-manager could be subjugated to the deterministic conceptual story of the organizational case. The owner-manager's potential voluntaristic actions and thoughts may be suppressed or judged against the constructs from outside.	Allow the complexity of small firm research area to be explored. Complexity of interpretation could confuse key themes of the research. Competing view points highlighting multiple realities of social world could avoid the trap of over-simplified models or answers.
Science is …	Based on strict rules and procedures. Deductive. Relying on sense impressions. Value free.	Based on common sense. Inductive. Relying on interpretations. Not value free.	The ability to suggest causation and determinism can be persuasive. The objective approach could lead to nuances and certain explanation not within the organizational and conceptual framework. Allow for comparison and replication.	Given the characteristics of the small firm (i.e. close involvement of owner/manager, heterogeneous firms and owner/managers) researchers should interact closely with the subject of study and adopt more inductive reasoning with high emphasis on data quality. Researchers must report their own values and biases. Lack of generalization of results presents a challenge.
Purpose of research …	To explain social life. To predict course of events. To discover the laws of social life.	To interpret social life. To understand social life. To discover people's meanings.	The nature of small firm area reflects constant changes in its internal and external environments, to the extent that a formal predictive scientific theory is difficult to emerge.	Young research field, requiring emphasis placed on exploratory and theory development rather than theory testing.

Adapted from Sarantakos (1997), page 40

Amaratunga et al (2002) argue that the ultimate purpose of a research is to add something of value to the body of accumulated knowledge, which implies that an unanswered question or unsolved problem will be identified and studied. Researchers are therefore to provide a suitable answer to the question or a solution to the problem, making it highly essential for the discussion of philosophy, before embarking on a research project.

Research can be categorized into two main and distinct methodological types, i.e. qualitative and quantitative (Sarantakos 1997, Gill and Johnson 1991, Amaratunga et al 2002) as in line with the above paradigms. The quantitative methodology is based on the positivist paradigm (Sarantakos 1997) and involves the collection of evidence which is standardized, measurable and comparable (Smith, 2002).

The qualitative methodology concentrates on words and observations to express reality and attempts to describe people in natural situations (Amaratunga et al, 2002).

Key features of the two paradigms and how they impact on small firm research are provided in Table 5.2 above.

5.3.1: Quantitative Methodology

Not until recently quantitative analysis and positivist explanations have dominated small business research (Curran and Blackburn 2001, Fuller 2003). Curran and Blackburn (2001) provide three forms of explanations for this state of affairs.

Firstly, it is argue that the conscious modeling of social and business research based on natural sciences and the success that this approach has enjoyed, has led to the belief that such approach could be applied with equal success to business activities.

Secondly, the existence of strong cultural appeal of numerically based approaches to the understanding of business phenomena, as findings and explanations that can be expressed in quantitative terms tend to be more appealing to audiences than that with alternative types of interpretation.

Finally, the recent ease of using and development of statistical techniques which offer a wide variety of ways of handling data in order to generate meanings, couple with the enchantment offered by computer related packages such as SPSS, has provided sufficient motivations for the use of quantitative methodology in the research of small business. Gill and Johnson (1991) argue that using highly quantitative analysis (e.g. survey) is most often

regarded as easily replicable and therefore reliable; however, the high degree of structure appears to create a relative lack of naturalism. This they further argue could lead respondents to making statements which, although acceptable within the theoretical and conceptual limit of the research, provide little or no opportunity for respondents to articulate their own understanding and feeling or bring their value judgments on the topic being researched. Barkham et al (1996) also note that within owners/managers as a group their response to questionnaire surveys differs in intelligence, ideology, class and experience, situation that could lead to potential data loss.

Amaratunga et al (2002) believe that the weaknesses of quantitative research lie mainly in its inability to ascertain deeper underlying meanings and explanations.

There also exists the problem of what Barkham et al (1996) describe as indirect effect, where some variables could have direct effect on a dependent variable and indirect effect on an independent variable.

Curran and Blackburn (2001) argue that, in small business study the owner's attitudes to growth is context-dependent, that it is influenced by variety of factors such as skill levels, personality, responsibility, market conditions and technological change, a position which is supported by Bridge et al (2003). Some of the factors like owner/manager skills are considered by Curran and Blackburn (2001) to be irreversible processes that cannot be quantified. Barkham et al (1996) also report on the difficulty in measuring the motivation of the owner/manager in pursuing growth, though an important factor in analyzing small business growth.

The positivist models of causality or explanations are considered inappropriate in the study of human and social phenomena, this provides a strong reason by opponents of the quantitative tradition for the rejection of statistical and quantitative analyses in small business research (Curran and Blackburn 2001, Gill and Johnson 1991, Amaratunga et al 2002). Amaratunga et al (2002) report that factors like physiological factors, motivating

factors, employees' capability are important in most social research, though these factors can be measured in quantitative terms; the appropriateness in explaining them in depth is limited.

The extreme heterogeneity of small business population is considered by Curran and Blackburn (2001) to present another great challenge in the adoption of quantitative analysis in the small business research. They argue that this undermines the usual assumption required for quantitative analyses, that all members belonging to a selected group should share some kind of similar properties or characteristics.

Many small firm researchers argue that small firm research is so young to the extent that it cannot benefit from a positivist approach of using quantitative methods of analysis based on scientific enquiry (Shaw 1999, Bygrave 1989).

5.3.2: Qualitative Methodology

Strauss and Corbin (1990) argue for the use of qualitative methodology in situations where little is known about a phenomenon or to gain more in-depth understanding of an issue which is difficult to convey in quantitative terms.

Small firm research involves the study of human action and behavior, it is concerned with the nature of reality in the social world, to the extent that the human 'subjects' of social world possess the ability to think for themselves, comprehend their own ability, behavior and have an opinion about the social world that they form part (Shaw 1999, Robson 1993). Researchers are therefore advised to adopt qualitative approach that reduces the distance between them and the researched subjects but not the positivist approach that seeks value free research (Gill and Johnson 1991, Shaw 1999, Hill and McGowan 1999). Amaratunga et al (2002) argue that qualitative data which places emphasis on people's 'lived experience', is fundamentally well suited for locating the meanings people place on the events, processes and structures of their lives: perceptions, assumptions, pre-judgments,

presuppositions, and for connecting meanings to social world around them. Eisner (1995) suggests that researchers should recognize the individuality, personality and attributes of the individual involved in the research process and argue strongly for recognition of the value and role of people to research.

Curran and Blackburn (2001) argue that small firm research like all other research aims at establishing why things occur, and place much more reliance in the potency of qualitative research to offer better explanation to social arrangements and activities than the positivist approaches as the latter tends to offer explanations to what is observed in terms of quantitative regularities only.

Hill and McGowan (1999) recommend further that given the characteristics of the small firm such as the close relationship between the enterprise and the own/manager, and heterogeneous nature of small businesses, that researchers should interact closely with the subject of study being quite often the individual entrepreneur, this they conclude is in variance with the positivist view.

Stokes (2000) argues that entrepreneurs' understanding of management terminology is likely to differ not only from theoretical textbook definitions, but also from one entrepreneur to the other. This therefore calls for the need to adopt more inductive reasoning with high emphasis on data quality, rather than the use of quantitative analysis based on large sample of questionnaire surveys in the small firm research.

According to Curran and Blackburn (2001) one of the greatest strength of qualitative approaches in the study of small businesses is their ability to focus on the micro level, the level of everyday lived activities, such that the small business owners, decision-making strategies, the way other interest groups are managed are all considered to be amenable to qualitative strategies. On the other hand they argue that quantitative approaches such as postal and telephone surveys, are considered not suitable as they can only capture certain level of lived reality.

Curran and Blackburn (2001) argue against the use of qualitative approaches to study the macro level, being the wider economic and social structures that impact on the understanding of small business issues. They contend that the relatively fixed structures such as the legal system, government and related institutions, the financial markets, etc; are present and have impact on the micro level.

Curran and Blackburn (2001) again express concern over generalizability of qualitative findings. As qualitative approaches are less of large scales in nature, due partly to their labor intensiveness, and high dependency on the skills of individual researcher, they tend to be less acceptable to audiences, such as policy makers (Curran and Blackburn, 2001).

5.3.3: Combining Quantitative and Qualitative Approaches

As noted in the above discussions both quantitative and qualitative approaches do suffer from certain weaknesses. This has led to many researchers advocating for the use of combined (qualitative and quantitative) research methods (Rossman and Wilson 1984, Gummesson 2001, Gill and Johnson 1991).

Gibb (1992) and Kirby (1995) suggest the use of stepwise "stage" approach that involves an initial exploratory qualitative research aim at developing initial insight or understanding into small firm activities to be followed by quantitative research intended to identify the specific practices of small firms. Kirby (1995) suggests that each research stage builds upon what has been learned in previous stage, in making an incremental contribution to the established knowledge base, thus allowing researches to provide an in-depth and focused analysis of small firm activities.

Kirby (1995) concludes that the debate is not about adopting either a 'qualitative' or 'quantitative' approach, but about developing a research design which is appropriate for the issue under investigation.

It is argued that with a combined methodology the weaknesses of each methodology can be overcome while maintaining the strengths of each paradigm (Curran and Blackburn 2001, Rossman and Wilson 1984, Amaratunga et al 2002).

Those researchers arguing in favor of methodological pluralism contend that the debate between these paradigms does not necessary reflect a fundamental conflict, but a reflection of different interests that are reconcilable (Gill and Johnson, 1991).

Siu and Kirby (1999) however, are with the opinion that the major limitation with the stage approach is that, the research error in one stage may be transmitted or even multiplied in the subsequent stages. They therefore recommend for the rigorous application of the stage approach, to eliminate the above problem.

Curran and Blackburn (2001) and Burrell and Morgan (1979) on the other hand argue that on both epistemological and methodological levels, combining different methodologies does not completely eliminate weaknesses associated with a single methodological approach. They further argue that philosophically the two paradigms remain fundamentally different and cannot be simply combined.

In Appendix 5.1 we present a review of some of the small firm research that used either quantitative or qualitative methodology or combined methodology.

5.4: The Selected Research Methodology

The research is based on both the qualitative and the quantitative methodologies. A two stage approach was therefore used, first by conducting exploratory qualitative interviews among 15 owner/managers of sampled small firms. This was followed by a self administered survey involving 122 small firm owner/managers.

Our decision to conduct the exploratory interviews was based on the following reasons:

- Small firm growth though has been widely studied in the developed countries; the same cannot be said of LDCs in general and Ghana in particular. There is therefore less comprehensive theories on small firm growth in Ghana.
- It was our view that theories and findings built and obtained in the developed countries may not be applicable in LDCs. The exploratory study was therefore aimed at understanding small firm growth from the perspective of the owner/managers.
- The exploratory study was to deepen our understanding of factors that lead to small firm growth in Ghana. Issues that came up at the exploratory interviews were incorporated into the research hypotheses, the framework and the survey questionnaires. It also assisted in the interpretation of the quantitative results and provided a basis for explaining the findings.

The quantitative survey method was used for the following reasons:

- To allow for the inclusion of a large number of small firms, in order to increase the generalizability of the research findings.
- The multiplicity of factors that affect small firm growth and the extent of their interaction can be properly studied through the application of multivariate statistical techniques.

5.5.0: Growth Indicators:

Researchers least agree on the indicators of small firm growth as well as how to measure growth (Barkham et al 1996, Davidsson and Wilklund 2000, Delmar et al 2003, Storey 1994, Weinzimmer et al 1998, Delmar 1997, Wilkund 1998, McPherson 1996, Ardishvili et al 1998).

The uses of different indicators for analyzing firm growth have resulted in the failure to achieve accumulation of knowledge and affect comparability of results (Davidsson and Wiklund 2000, Wiklund 1998, Weinzimmer et al 1998, Delmar et al 2003, Bridge et al

2003, Barkham et al 1996). Weinzimmer et al (1998) note that, the use of different growth indicators raises two major concerns: (a) that different indicators of growth may affect theory development by influencing the relationships found between determinants of growth and alternative indicators; and (b) that some indicators may be more suitable than others, depending on the phenomenon being studied and the characteristics of the research sample.

However, Delmar et al (2003) argue that firm growth is fundamentally a multidimensional rather than one-dimensional phenomenon, and recommend that researchers should not seek to use 'one best way' of indicating growth but should use different forms of growth with different growth measures.

Firm growth has conceptually been measured using various indicators. Bridge et al (2003) provide a list as shown in Table 5.3 below.

Table 5.3: Growth Indicators

Share Value	Return on Investment	Market Share
Net Worth	Size of Premises	Exports/Imports
Profit	Standard of Services	New Products/Services
Employment	Profile/Image	Innovations, Patents, etc.
Turnover	Number of Customers	Value Added

Source Bridge et al (2003) page 272

Weinzimmer et al (1998) note that some growth indicators may be correlated empirically, however, in conceptual terms they may differ. Barkham et al (1996) on the other hand note that in the long run movements in growth measures are correlated, in the short term; however, there exists the possibility of significant change in one variable as other variables remain the same. Sales and employment figures are said to be highly correlated (McPherson 1996, Smallbone et al 1995).

5.5.1: Market Share

Davidsson and Wiklund (2000) argue that of the various growth indicators it is only the market share that represents different approach to growth measurement. They recommend that the use of market share as a growth indicator should be avoided for the reason that high growth firms have the characteristics of expanding without necessary taking the customers of competitors, but can increase their sales, employees, and assets and not market share.

5.5.2: Profits

Profits are very difficult to measure in small firms (Barkham et al 1996); and managers are reluctant to provide such information. Profits and growth have also been found to be inversely related (Barkham et al 1996, Cubbin and Leech 1986, Dobson and Gerrard 1989).

5.5.3: Sales

Sales growth is reported to be the most favored measure of growth (Barkham et al 1996, Honjo 2004, Storey 1994, Weinzimmer et al 1998, Delmar et al 2003, Delmar 1997, Ardishvili et al 1998). Weinzimmer et al (1998) report that of 35 studies reviewed as much as 83% used sales as an indicator of growth. Sales figures are said to be relatively available (Davidsson and Wiklund 2000, Delmar et al 2003) as well as favored by managers themselves (Barkham et al 1996). Davidsson and Wiklund (2000) and Delmar (1997) argue further that growth process is normally driven by sales. In other words it is sales increase that results in an increase in other factors such as employees or machinery. They contend further that an increase in sales can even occur through outsourcing that may cause no further increase in resources or employment, hence sales growth appears to have the greatest generality of all the indicators.

Weinzimmer et al (1998), recommend the use of sales data in studies involving different industries as some industries are capital intensive and others labor intensive for that matter neither the asset nor employee based will be appropriate.

Sales are however, affected by accounting conventions and periods (Honjo 2004, Barkham et al 1996). There is therefore the need to control differences arising from these factors. Sales figures have to be adjusted for inflation and exchange rates (Garnsey et al 2003, Delmar et al 2003), and are also affected by vertical integration (Garnsey et al, 2003). McPherson (1996) reports that most small firms do not keep records and are therefore unable to report even their current sales or profits accurately.

5.5.4: Employment

The support for the use of employment as a growth indicator lies within the resource and knowledge-based views of the firm (Delmar et al 2003). They contend that, if the firm is considered as bundles of resources, growth analysis should then focus on the accumulation of resources (e.g. employees).

Employment is seen as a natural choice of measure where the purpose of the research is on job creation (Delmar et al 2003, Storey 1994, Bridge et al 2003, Delmar 1997, Davidsson and Wiklund 2000, Brown et al 2004, Birch 1987).

Employment is considered as a variable most relatively available and not affected by inflation (Brown et al 2004, Curran and Blackburn 2001, Holmes and Gibson 2001).

The use of employment, however, is limited by the fact that it is affected by labor productivity increases, improvement in technology, and degree of integration (Delmar et al 2003, Weinzimmer et al 1998). Growth could occur in many other variables of the firm without an increase in employment base (Delmar et al 2003, Bridge et al 2003, Barkham et al 1996).

5.5.5: Assets

Assets are sometimes used to measure growth especially in manufacturing firms with a high capital investment (Weinzimmer et al 1998, Davidsson and Wiklund 2000). Assets based measure may suffer from accounting conventions (Davidsson and Wiklund, 2000).

5.6: Growth Measures

There are different methods of calculating firm growth by researchers (Storey 1994, Weinzimmer et al 1998, Davidsson and Wiklund 2000, Delmar 2003). Davidsson and Wiklund (2000), and Delmar et al (2003) group these measures basically into two i.e. absolute growth and relative growth rate.

Absolute growth takes the difference between a firm sizes from one point to the other, whiles growth rate measure relative changes in size (Davidsson and Wiklund 2000). Both methods are affected by initial firm size (Davidsson and Wiklund 2000, Storey 1994, Weinzimmer et al 1998, Delmar et al 2003, Delmar 1997). Delmar et al 2003, argue that absolute measures tend to ascribe higher growth to larger firms whereas smaller firms will be seen to show higher growth rate. In other words firm size would have a positive impact on absolute growth and a negative impact on growth rate (Weinzimmer et al 1998, Almus 2002).

The use of compound measures involving elements of both absolute and relative measures though is seen to have technical superiority, the measure is said to conceptually measure nothing i.e. neither value nor per cent (Davidsson and Wiklund 2000).

The use of two points in time normally first and last years in calculating growth has been criticized for ignoring developments during the middle period of a study (Weinzimmer et al 1998, Wiklund 1998, Delmar et al 2003, Brown et al 2004). To eliminate problems due to irregular growth, the use of natural logarithms is recommended (Barkham et al 1996, McPherson 1996). Weinzimmer et al (1998) advance the use of regression line; however,

this has a drawback of requiring not less than 15 observations to properly fit the regression line to the time series data. Difficulty arises in the use of logarithm transformation where too many negative changes occur in growth variable. Delmar et al (2003) argue against smoothing out the growth pattern as this method does not allow for the proper study of regular or irregular phenomena of firm growth which may be due to different causes.

5.7: Source of Growth

Firm growth principally arises from two different areas i.e. through expansion of present business activities (organic) or by acquiring existing resources or firms (acquisition) (Delmar et al 2003, Davidsson and Wiklund 2000, Penrose 1995). Davidsson and Wiklund (2000) advocate the separation of the two growth mechanisms so that research results will not be confounded to give a rise to misinterpretations of findings. It is further argued that the processes that cause these two different types of growth are fundamentally different, with varying degree of implication to management, the entrepreneur and society in general (Delmar et al 2003, Davidsson and Wiklund 2000).

Organic growth essentially reflects entrepreneurial activity (being emergence and expansion of new economic activity). Growth through acquisition constitutes shifting resources from one entity to the other which represents no real addition to job creation to the society as a whole (Davidsson and Henrekson, 2002).

How some small firm researchers conceptualize and measure growth, as well as the period of study, sample size, adjustment made to growth concepts applied and unit of analysis are shown in Appendix 5.2.

5.8: Indicators, Measurements and Source of Growth Used

Growth is indicated by an increase in employment or sales and calculated as the relative change in size from 2001 to 2004. To eliminate the problem of heteroscedasticity the

relative percentage change is transformed by using natural logarithms. As no growth index is neutral (Janssen, 2002) our preferred option of relative change in size is considered the simplest measurement procedure and the most preferred by researchers of growth determinants (Janssen 2002, Delmar 1997).

Those firms that at least doubled their number of employees over the studied period are considered as high growth. This and other categories of growth are shown in Table 5.4 below.

Table 5.4: Growth Indicators and Categories

Growth Category	Growth Indicator
High Growth	Firms that at least doubled the number of employees over the study period.
Growers	Firms that increased the number of employees by more than 20 % but not exceeding 99 %.
Stable Firms	Firms that increased the number of employees by not more than 20 %.
Decliners	Firms that recorded negative growth rate.

The above distinctions albeit arbitrary, can be considered as a fair representation of small firm growth in LDCs. It is believed that for a small firm to double its number of employees within a period of four years in the light of the overall slow national economic growth in Ghana like many other LDCs, such firm can seriously be considered as a high growth one. Other researchers have similarly classified firms that doubled their number of employees over a period of 4-5 years as high growth or "gazelles" (Barkham et al 1996, Statistics Canada 2004).

In the case of employment growth our definition includes the owner/managers, as job creation for these types of people is equally important in social terms as jobs created for others (Brown et al 2004). Workers on part time employment are included as if they were of full time. This position is based on our knowledge of firms' employment practices in Ghana. It is common to have some employees classified as part time workers but their work schedules in all respects are like those engaged on full time basis. This decision

however, may have an impact on our analysis as some employees may have been engaged on actual part-time basis and could be disengaged anytime. An alternative measure for example was to treat a part-time employee as the equivalent of half a full-time employee (Curran and Blackburn 2001) this does not completely deal with the problem. This therefore serves as a limitation to the interpretation of the results.

In view of the highly volatile nature of data for the first year of operation, growth rates calculation excludes data for year 2000 as some of the firms commenced operation during that year. It is important to note that annual sales are reported cumulatively therefore during the start-up year sales become an unreliable growth measure as the exact start-up date may not be available (Brown et al 2004). Sales growth rates have been deflated by inflation rates in order to obtain real growth rates.

5.9.0: Definition of Small Firm

5.9.1: Theoretical Background

To understand the growth of small businesses Bridge et al (2003) contend that, small businesses are not big businesses writ small, and that concepts, theories, practices, forms of behavior and interventions that apply to big businesses and their management will not necessary apply on a small scale to small businesses. This position has earlier been echoed by Penrose (1959), that small and large firms are as fundamentally different from each other as a caterpillar is from a butterfly.

McMahon et al (1993) also contend that defining small business possesses a vexing and enduring difficulty and that it is easier to describe than to define in precise terms what constitutes small business. McMahon et al (1993) are with the opinion that small firms are best identified by their inherent characteristics.

An overview of the two main basis of defining small firms (Gibb 1988, McMahon et al 1993) is presented in the sections below.

5.9.2: Definitions Based on Number of Employees:

The quantitative definitions based on number of employees are popular for reasons such as its simplicity (Curran and Blackburn 2001, Forsaith and Fuller 1995). These researchers contend that employment data is convenient because it is collected anyway for national statistical purposes and could therefore be available to researchers and policy makers. Even where not available it is relatively less difficult to collect directly from firms.

The number of employees' proxy does not suffer from the same valuation difficulties as financial value based measures such as turnover (Holmes and Gibson 2001, Forsaith and Fuller1995).

Indeed the simplicity of number of employees, in practice continue to face more and more difficulties, this according to Curran and Blackburn (2001) is due mainly to the fact that more and more employment nature is moving away from full-time to part-time employment, which is difficult to measure.

Pleitner (1989) points out that the cash transactions for businesses with the same number of employees, even those in the same sector, can vary considerably from a business to business, this is mainly due to the differences in the manufacturing structures, the quality of leadership personnel, the utilization of capacity and the capital and wage intensity, as well as the level of productivity.

5.9.3: Definitions Based on Financial Turnover:

Apart from number of employees, turnover is another preferred measure of business size. Turnover actually suffers from the same weaknesses as number of employees and even worse. Turnover like employment has sector characteristics (Curran and Blackburn, 2001). Obtaining information on small firms is difficult, Curran and Blackburn (2001) and is even more difficult in respect of information on turnover (Gill and Johnson 1991, Stokes 1998).

They further argue that in most regimes small firms are not required to make their accounts public. There exist also the problem of comparability arising from different accounting conventions and standards being applied by firms from different countries and equally from different sectors.

Another frequently mentioned problem with turnover is the impact that inflation has on turnover figures especially where the purpose is to study firms over time (Stokes 1998, Curran and Blackburn 2001, Storey 1994, Bridge et al 2003, Holmes and Gibson 2001).

5.9.4: Analysis of Some Existing Definitions:

The strengths and weaknesses of some existing definitions are discussed below.

5.9.4.1: The Bolton Committee Report (1971)

In the United Kingdom (UK) the Bolton Committee Report has played a significant impact in developing the understanding of small businesses (Bridge et al 2003). The Committee attempted to provide a comprehensive definition of small business by formulating both quantitative or statistical and qualitative or economic definitions.

In economic terms the report defined a small firm as one satisfying the following three criteria:

(a) that it has a relatively small share of its market,

(b) that it is managed by its owners or part-owners in a personalized way, and not through the medium of a formalized management structure,

(c) that it is independent in the sense that it does not form part of a larger enterprise and that the owner-managers should be free from outside control in taking their principal decisions.

Table 5.5: Bolton Committee Quantitative Definitions of Small Firm

Manufacturing	200 Employees or fewer
Retailing	Turnover of £50,000 per annum or less
Wholesale trades	Turnover of £200,000 per annum or less
Construction	25 Employees or fewer
Mining/Quarrying	25 Employees or fewer
Motor trades	Turnover of £100,000 per annum or less
Miscellaneous services	Turnover of £50,000 per annum or less
Road transport	Five vehicles or fewer
Catering	All excluding multiples and brewery-managed pubs

Source: Bolton (1971)

The report having acknowledged the weaknesses in the qualitative definition offered an element of quantitative definition shown in Table 5.5 above.

As reported by Storey (1994), the Bolton statistical definition uses different definitions of a small firm in different sectors. It again shows that the criteria upon which the judgment of 'smallness' was made also varied sectorally.

The economic and statistical definitions have faced a number of criticisms (Stokes 1998, Storey 1994).

Looking at the economic definition, Storey (1994) recognizes certain incompatibility regarding the criterion that a small business is one being managed by its owners or part owners in a personalized way and not through the medium of formal management structure with the statistical definition relating to manufacturing firm which could have up to 200 employees.

Stokes (1998) also criticizes Bolton definition on the grounds that independence is difficult to measure and that the definition ignored franchises which do not form part of a larger enterprise, but included sub-contractors very dependent on one customer.

5.9.4.2: The Wiltshire Committee Definition:

In Australia (Holmes and Gibson 2001) report that, the Wiltshire Committee provided the first clearly stated Australian definition of small business. The following definition was recommended by the committee.

"A business in which one or two persons are required to make all the critical management decisions: finance, accounting, personnel, purchasing, processing or servicing, marketing, selling, without the aid of an internal specialist and with specific knowledge in only one or two functional areas."

The definition also included a quantitative element of a limit on the number of employees to be less than 100 people.

As noted by Holmes and Gibson (2001) the Wiltshire Report definition has had a great impact on many subsequent definitions. For example, the West Australian Small Business development Corporation defines a 'small business' as:

a business in which all the main management decisions are made by one or two people without the help of internal staff management expertise, and which has a small share of the total market and labor force which is small in comparison with the largest units in the same industry (SBDC, WA, Website).

5.9.4.3: United States Definitions

As noted by Osteryoung and Newman (1992) there is no one uniform definition of small business in the U.S.A. However, there is evidence to suggest that some variables are commonly used in distinguishing small firms from their large counter parts. They list some of these variables as: number of employees, annual sales, amount of assets, management organization structure, and dominance in industry. According to Osteryoung and Newman

(1992) for quantitative definition the most frequent used variable is the number of employees, with number of employees ranging between 50 and 1000.

5.9.4.4: European Union (EU) Definition:

In 1996 the EU used the term 'Small and Medium Enterprises' (SMEs) and redefined it, by using both quantitative and qualitative criterion. The commission defined SMEs as shown in Table 5.6 below:

Table 5.6: The EU Definition

Criterion	Micro	Small	Medium
Max. number of employees	9	49	249
Max. annual turnover	-	€7million	€40million
Max. annual balance sheet total	-	€5million	€27million
Max. percentage owned by one, or jointly by several, enterprise(s) not satisfying the Same criteria.	-	25%	25%

Source: DTI (2000).

The commission pointed out that the number of persons' criterion is undoubtedly one of the most important and must be regarded as imperative, however the financial criterion is introduced as a necessary complement in order to grasp the real importance and performance of an enterprise and its position compared to its competitors (European Commission, 1996).

The commission was also concern about ownership and control and considered for example that an SME belonging to a large group of companies can have access to funds and assistance that may not be available to competitors of the same size. The commission therefore made a further criterion, namely that an SME is only allowed to have a maximum of 25 percent investment by one or more outside companies.

Curran and Blackburn (2001) argue that the EU definition has one major advantage over the Bolton, as it does not vary its criteria according to the sector of the enterprise. The EU definition again recognizes that the SME group is not homogeneous, in the sense that

distinctions are made between micro, small and medium sized enterprises (Curran and Blackburn 2001).

Curran and Blackburn (2001) however, argue that one key problem with the EU definition is that it is too 'all embracing' for a number of countries, and within a number of countries a vast majority of firms will fall within the SME category.

5.9.5: Definition of Small Firm Used

In the absence of an official definition of what constitutes a small firm in Ghana, our definition is principally based on the number of employees (i.e. between 10 and 250 inclusive). The upper limit of 250 employees is supported by Ayyagari et al (2003) who reviewed small firm definition among 77 countries and concluded that 54 (70 percent) had a cutoff of 250 employees. Out of the 54 countries 13 (24 percent) were LDCs, 24 (44 percent) were middle income countries and rest 17 (32 percent) were high income countries. The lower limit of 10 was in line with EU definition of micro enterprises (see Table 5.6 above).

The definition excluded firms that formed part of a larger enterprise, which is supported by the Bolton definition. It was considered that management of firms with parent company ownership may be carrying out the strategic intention of the parent company and receive parent company support which could account for differences in growth. The focus was therefore to interview owner/managers of the small independent firms.

5.10: Data Source

There are two main types of data source for research being primary and secondary. While secondary data source represents the use of existing data, primary data involves the collection of original data by the researcher. In view of the lack of reliable and accurate data on small firms in Ghana it is considered less appropriate to use secondary data

therefore this research is based on original data collected through a survey. The survey data was complemented with information gathered through the qualitative phase. As such, the basis for the primary data used for the entire study was obtained from an exploratory stage and a quantitative survey stage.

5.11: Sample Selection

One of the most difficult problems that face small firm researchers is accessing the small firms (Curran and Blackburn, 2001). The difficulty is mainly due to lack of up-to-date lists of small firms, and unwillingness on the part of small firm owners to divulge information to outsiders. These can affect the response rate and any attempt to generalize research findings. The impact of the above poses a greater challenge to researchers in LDCs.

Some existing databases of firms in Ghana were reviewed for their appropriateness. These databases were found to be inaccurate and incomplete. There were no frequent updates to include new firms and delete those that have ceased operations. There were no records on employment and no detailed classification of firms into industrial sectors. Addresses and other contact details in many cases were found to be incorrect.

The study is based on Association of Ghana Industries' (AGI) database. The AGI is non-profit voluntary business association with about 500 members made up of large, medium and small firms operating in Ghana. It was formed in 1958 as the Federation of Ghana Industries and later became the Ghana Manufacturers' Association. In the past, members were firms in the manufacturing sector but amended its constitution in 1984 to allow firms in other industries such as the service sector to join. Its members are made up of firms from both the public and private sectors and account for the majority of the industrial output in Ghana.

The AGI database though, suffers from some of the above weaknesses; it was preferable to the other databases for the following reasons. First, it had information on employment at

the time that a firm joined the association. The existence of such data made it possible for the initial segmentation of firms into the various size groups and also ensured that firms with employment base higher than the required number of employees being 250 were excluded.

Second, the database existed in electronic form. This saved time that would have been involved in transferring the hard copy data into a computer database. The addresses and contact persons indicated in the database were found to be the most reliable and accurate compared to that of the others.

A major weakness of the AGI database was that it included only those firms that had opted to be members of the association, therefore it could not be said to have a complete list of the target population of small firms in Ghana.

The exclusion of some industries and size brackets from the AGI list tends to limit the extent of statistical inference that can be made to the population of small firms in Ghana.

An initial clean up of the database was carried out in September 2004 just before the commencement of the field work. This was intended to minimize the effect of some of the inaccuracies associated with the data. The clean up process involved telephone calls made to the firms to ascertain information regarding:

-the current number of employees,

-the exact location of the firm,

-the industrial sector within which the firm is located,

-the year of establishment and,

-whether or not the firm is a subsidiary of another firm.

Table 5.7: Analysis of AGI Data

Original Data							
	No. of Employees						
SECTOR	Below	Between			Above	Not Available	Firms TOTAL
	10	**10-50**	**51-150**	**151-250**	**251**		
Wood processing	4	3	5	10	10	10	**42**
Printing	8	17	5	2	2	9	**43**
Metal	10	30	13	5	7	16	**81**
Plastics	0	11	9	3	6	12	**41**
Food Processing	16	12	5	10	27	27	**97**
Total	**38**	**73**	**37**	**30**	**52**	**74**	**304**
REVISED DATA							
Wood processing	14	21	4	3	0	0	**42**
Printing	2	17	12	8	4	0	**43**
Metal	11	30	20	5	10	5	**81**
Plastics	0	11	11	14	5	0	**41**
Food Processing	46	12	11	14	7	7	**97**
Total	**73**	**91**	**58**	**44**	**26**	**12**	**304**

This process covered about 70 percent of firms within the selected sectors. Firms with the following characteristics were excluded from the sample frame:

-number of employees less than 10 or exceeding 250,

-ceased to operate

-subsidiary of another firm

Table 5.7 above, provides details of the original data and the revised data.

All firms that were in the list of the revised database and qualified subject to the above criteria were included in the survey, for the reasons indicated below.

(a) A reasonable sample size was needed to ensure that the multivariate analysis to be conducted does not result in either too little statistical power for the test to identify significant results or that the results though may artificially fit the sample very well, lack generalizability (Hair et al 1998).

(b) A greater heterogeneity is required to allow for group analysis which also called for bigger sample size.

(c) A non-response rate is generally high regarding small firm research, it is therefore considered prudent to have larger sample size to ensure that adequate number of responses is obtained for effective analysis.

Table 5.8: Sample Frame Analysis

Sector	No. of Firms		
	Qualitative Interview	Survey	Total
Furniture & Wood Processing	3	35	38
Paper & Printing	3	34	37
Metal Works	3	52	55
Plastics & Rubber	3	33	36
Food Processing	3	50	53
Total	**15**	**204**	**219**

Fifteen (7 %) of firms interviewed at the exploratory stage were removed from the survey sample in order to avoid potential bias. These firms were however, used to pre-test the survey questionnaire.

5.12: Data Collection Method

The relatively small sample size made it important to obtain a high response rate. It was noted from the onset that small firm research is usually associated with low response rate (Curran and Blackburn, 2001). Therefore the preferred data collection method should be one capable of offering the highest response rate. Self-administered postal questionnaire though considered cheaper, less time consuming and capable of reaching a large geographical area, was not used. This was because it was not expected to yield a high response rate. The postal system in Ghana is less developed therefore problems such as none and late deliveries were likely to have negatively impacted on the effectiveness of self-administered postal survey.

Telephone interview though seen as less expensive and time consuming was not used because it was considered that respondents may be more reluctant to provide confidential

information on the telephone for lack of trust. Respondents were expected to cooperate better when there is personal contact.

Face to face interview method was therefore used. It was not only expected to offer the highest response rate, but also to ensure that the questionnaire was answered by the owner/manager themselves or a person of high responsibility in the firm. It was considered as an appropriate method of reducing problems of mistrust.

Some researchers advocate for incentives as a way of increasing response rate (Watson, 2001). No such incentives were offered due to the cost implication involved. Other researchers also believe that a promise to share the research results can encourage a high response rate. This was not expected to generate any significant interest for the simple reason that most small firm owners in developing countries feel that a research work does not have any practical benefit to them (Aidis, 2003).

5.13: Unit of Analysis

The study is aimed at examining growth factors involving firms that employed not less than 10 persons and not more than 250 at the end of the study period and were in existence at the beginning of the study period. The study therefore included firms that have operated at least for one year. The inclusion of younger firms may affect growth volatility that is normally associated with young firms (Barkham et al 1996, Storey 1994). It was however, important to ascertain the extent to which age impacts on small firm growth in LDCs. Focusing on the firm as the primary unit of analysis is supported by the argument that; it is the business which can be seen to start and end, create the jobs and bring economic growth (Bridge et al, 2003).

Using the firm as the unit of analysis can be clearly supported in a situation where there is complete separation of ownership from management. However the difficulty arises in many small firms as the owners exert a considerable amount of influence on these firms'

operations and therefore the firm has similar characteristics of the owner/manager (Bridge et al, 2003). The study was therefore designed among other things to focus on the characteristics of individual owner/manager.

The survey covered five sub-sectors within the manufacturing sector in Ghana namely: food processing, furniture and wood processing, metal works and, plastics and rubber as well as paper and printing.

5.14: The Period of Study

Firm growth is highly dependent on time such that the period of study is an important matter to consider when researching into growth phenomena (Weinzimmer et al, 1998). Literature review carried out by Weinzimmer et al (1998) indicates that most growth studies adopt a study period of 4 years and above.

The period chosen for the study i.e. 2000 to 2004 was considered to be the most recent for which data was likely to be available. The period also witnessed a relatively stable micro-economic environment in Ghana making it an appropriate time to study what leads to the growth of small firm in the country.

Following Janssen's (2002) argument, firms that have operated for less than four years will not be considered, in order to avoid static measurement as growth is essentially a dynamic phenomenon.

5.15: Gaining Access to Respondents

Given that the sample frame size was small, a strategy was adopted to ensure high cooperation from the owner/managers. A two stage approach was used to gain access to the respondents. First, personal telephone calls were made to a number of the expected respondents explaining the purpose of the research and requesting for their participation. This approach, unlike personal letters allowed for quick and effective interaction.

Respondents were told the average time that the interview was expected to take and that the time and place of interview were at their convenience.

No letters were sent because of the weaknesses in the postal system in Ghana. Other forms of letter delivery such as courier were considered expensive. It was again felt that many small business owner/managers are busy people, therefore they may pay less attention to letters that may not offer them any direct benefits.

Third parties' introductions were also solicited, especially where the initial respondent's cooperation was considered to be low. The strategy was even more beneficial with regards to immigrant respondents. Initially many of these respondents were reluctant to be interviewed but, when third party introduction was used cooperation improved tremendously.

The second stage which involved the administering of the questionnaire itself was always preceded by a telephone call to remind respondents of the appointment. After interviews calls were made to thank all participants. Follow-up calls were also made for a rescheduling of a missed or cancelled appointment.

5.16: The Questionnaires and Measures

As argued by Wiklund (2001) it is prudent to use measurement scales which have been validated by previous research, rather than developing new ones as far as they exist. More importantly using existing variables that have been tested allows direct comparison of research results. In the light of the above many of the questionnaires and measurements were based on previous studies (e.g. Barkham et al 1996).

Table 5.9 below indicates the main variables and the questionnaires used to obtain data for the measurement of the variables as well as references of their previous applications.

References to measurements and questionnaires sources are meant to show researchers who have previously used the variable(s) and have shown the importance of these variables to small firm growth but not to state the very first use of the variables.

Table 5.9: Variables, Questionnaires and References

Variable	Research Question	Reference
Growth Measures		
Employment Growth	B1	Barkham et al 1996, Wilkund 1998, McPherson 1996, Storey 1994.
Sales Growth	B2	Barkham et al 1996, Wiklund and Shepherd 2003, Smallbone et al 1995, Delmar et al 2003, Storey 1994.
Owner/Manager Characteristics		
Growth Aspiration	B3, B4, B5 and B6	Davidsson 1989, Wilkund 1998, Wiklund and Shepherd 2003, Orser et al 2000
Level of Education	A4	Barkham et al 1996, Wilkund 1998, Storey 1994, Brown et al 2004.
Age in Years	A4	Barkham et al 1996, Wilkund 1998, Davidsson 1989.
Nationality	A4	Wilkund 1998, Ramachandran and Shah 1999.
Prior Industry Experience	C1	Barkham et al 1996, Wilkund 1998, Storey 1994.
Entrepreneurial Family Background	C4	Storey 1994, Southern 2000, Smallbone and Welter 2001.
Portfolio Ownership	C2, C3	Barkham et al 1996, McPherson 1996.
Firm Characteristics		
Sector	C1	Barkham et al 1996, Storey 1994, McPherson 1996, Rankin et al 2002, Wilkund 1998

Table 5.9 continued: Variables, Questionnaires and References

Variable	Research Question	Reference
Firm Size- No. of Employees	B1	Barkham et al 1996, McPherson 1996, Storey 1994.
Firm Age in Years	A1	Barkham et al 1996, McPherson 1996, Storey 1994.
Number of Owners	A4	Barkham et al 1996.
Business Strategy		
Marketing Activities	E1	Barkham et al 1996, Storey 1994.
Product Innovation	E5	Barkham et al 1996, Storey 1994.
Product Improvement	E6	Barkham et al 1996.
Process Innovation	E7	Barkham et al 1996, Joyce et al 1996.
Engage in Export	E2, E3, E4	Barkham et al 1996, Storey 1994, Ibeh 2000.
Formal Planning	E7	Barkham et al 1996, Storey.
External Training	E8	Nottinghamshire Research Observatory 2002a.
Internal Training	E10	Nottinghamshire Research Observatory 2002a.

Though, formal questionnaire is considered as the most appropriate for this second stage of the research, it is not without limitations. It has been argued that owner/manager responses to a survey provide personal perception about the subject matter being studied. The most frequently highlighted problem is that responses can clearly be influenced by individual differences and personal judgment which may be at variance with real situation on the ground (Gill and Johnson 1991, Baah-Nuakoh 2003, Brown et al 2004).

It can also be argued that data collected from multiple respondents within the same firm will have more validity than data based on the perception of one person. In the case of small firm, however, the owner/manager is seen as the most influential person around which the firm's development revolves. It is therefore an objective of this research to interview the owner/manager or in his/her absence, any other person who is deeply involved in the management and decision making process of the firm.

The questionnaire which took an average of 20 minutes to complete was divided into five main sections (full version is attached as Appendix 5.3):

(a) firm background and characteristics,

(b) growth measures and intention,

(c) characteristics of the owner/manager,

(d) business strategy and,

(e) growth constraints.

We present below details of how concepts and variables were measured. Appendix 5.4 provides summary of concepts and variables used and how they have been defined and measured.

(A) The Firm Background and Characteristics

This section of the questionnaire requested information about the background characteristics of the firm, particularly in terms of: the year in which the business started operation, legal status, location and industrial sector.

Information relating to ownership structure and profiles was also requested. Specifically the questionnaire sought information on: the number of owners or partners, respective percentage holding of owners, their ages, highest educational qualification, and nationality as well as when they became owners.

(B) Growth Measures and Intention

In this section questions were directed to ascertain data on annual employment, and turnover for years 2001 to 2004, the two measurements of growth used in this research. Initially questions were framed to obtain rate of growth in these variables, however, this was amended after pre-testing. It became evident that respondents found it easier to remember absolute employment and sales figures than percentage changes.

The section also sought to find out the extent to which the owner/managers had intended to grow their businesses during the studied period.

(C) The Characteristics of the Owner/Manager

This section requested information on the demographic profile of the owner/manager. Respondents were asked to provide information on their previous working experience and positions. Information on other business interests of the owner/manager was also requested.

Business Strategy

This section of the questionnaire was meant to ascertain the kind of business strategies undertaken to achieve growth during the studied period. Questions focused on marketing, exports, innovations, and planning as well as training activities. Respondents were asked to provide their marketing expense in terms of turnover as well as the number staff employed to undertake marketing activities. On export activities two questions were asked. First, whether the firm is engaged in export or not, and the percentage of sales accounted for by export for each year during the studied period.

Regarding innovation questions were limited to product and process innovation activities. Respondents were asked to rank on a scale of 1-5: (1) how frequently they add new products onto existing line of products, (2) how frequently they make significant improvement in existing products and (3) the level of significant improvement made in their production process during the period 2001-2004. On business planning the two questions asked were meant to find out if a firm had a written business plan and also engaged in annual budgeting. Questions on staff training centered on how frequently employees are engaged in both informal and formal training.

(D) Growth Constraints

As it was part of the objectives of this research to analyze factors that constrained the growth of small firms during the period 2000-2004 a number of constraining factors were identified following the exploratory research and review of existing literature. Respondents were asked to rank (on 5-point scale) how specific factors have impacted on the growth. At the analysis stage these factors will be investigated under the categories: Institutional barriers (Informal and Formal) and economic environmental barriers (Macro and Micro).

5.17: Pre-testing of Questionnaire

Pre-testing of the initial questionnaire was conducted in two stages. The fifteen firms that took part in the qualitative interview were grouped into two. The grouping was done to ensure varied representation of sub-sectors and size brackets. The initial questionnaire was sent to each respondent in the first group of seven firms about a week before an individual meeting was held. This offered them enough time to appropriately review and comment on all aspects of the questionnaire. The separate meetings took an average time of twenty minutes and were all conducted within one week. Appropriate changes to the questionnaire were effected.

The second stage involved a demo face to face interview of seven respondents. After which comments were solicited. No major issues came up at this stage.

5.18: Sample Representativeness

Though it is important to ensure that the sample used reflects the population of small firms in Ghana to allow for generalization of the results, detailed analysis is hampered because of existence of limited data of small firms in the country.

5.19: Response Rate

The survey was undertaken within a period of three months from June15 to September 19, 2005. A total of 176 firms were contacted of which 122 were interviewed. A respondent rate of 60 percent was achieved. Fifty four firms were contacted with no response.

Further 28 firms representing 14 percent of the sample firms were not contacted. Though there is no universal acceptance as to what constitutes good response rate, a 60 percent response rate is normally regarded as good for analysis (Aidis, 2003). Menon et al (1999) also report that the average response rate involving higher management survey is between 15 to 20 %.

The response rate has been computed as a percentage of the number of responding firms divided by the total number of eligible firms (i.e. 122/204*100).

5.20: Sampling and Non-Sampling Errors

This section discusses some of the errors that can potentially affect the results of the survey research under the headings sampling and non-sampling errors.

(a) Sampling Error: Due to the small size of the sample frame a decision was taken to include all firms within it. Therefore random sampling procedure was not used. Thus random sampling error which occurs when a particular selected sample is not a perfect representation of the population (Slowinski, 1988) is not relevant in the survey conducted.

(b) Non-Response Error: Non-response error which may result from inability to collect complete data on all firms in the sample frame can affect this study in two different ways. First, a decrease in the sample size or in the amount of information collected in respect of a particular question may result in a larger standard error. Second it introduces a bias to the extent that non-respondents differ from respondents within the sample (Slowinski, 1988). The face to face interview method used to

administer the survey questionnaire ensured that item non-response was reduced. Due to the low educational background of some of the respondents it became important to explain some aspects of the questionnaire where the need arose. This was however; carefully done so as to ensure that results were not biased. Quick follow ups were made to obtain data that were not readily available at the time of the interview. All questionnaires were fully completed except for two that the respondents refused to provide data on sales for confidential reason.

Unit non-response which occurs when there is no complete response from a prospective respondent was considered as a major challenge to the quality of data to be obtained for this research. Procedures made to reduce the rate of unit non-response have been detailed under the caption 'gaining access to respondents'. Nonetheless, 54 firms though contacted did not respond, whiles further 28 firms were not contacted given a total unit non-response rate of 40 percent (see table 5.10 below).

Table 5.10: Response/Non-response Analysis

	Sampled	Contacted	Responded	Contacted No Response	Not Contacted	Non Response
Furniture & Wood Processing	35	30	22	8	5	13
Paper & Printing	34	31	26	5	3	8
Metal Works	52	40	25	15	12	27
Plastics & Rubber	33	30	21	9	3	12
Food Processing	50	45	28	17	5	22
No. Firms	**204**	**176**	**122**	**54**	**28**	**82**
Percentage of Sample		**86%**	**60%**	**26%**	**14%**	**40%**

As shown in Table 5.11 below; out of the 54 firms contacted but did not respond 16 representing 30% were total rejection of being part of the survey. In all cases attempts were made to convince refusals to take part, which included making personal appeal by calling on them after initial refusal. In the case of 12 firms (22%) the owner/managers were absent, further calls continued to receive the same response. Attempts to interview an

alternative person proved futile mainly due to lack of authority to disclose information, and non availability of an alternative person. Almost half of these respondents requested that they should be called back; however numerous calls did not yield the required results.

Table 5.11: Analysis of Firms Contacted Without Response

Sectors	Refusal	Absent	Asked to Call Back 5-10 Times	Asked to Call Back Above 10 Times	Total
Furniture & Wood Processing	3	2	1	2	**8**
Paper & Printing	2	1	0	2	**5**
Metal Works	3	3	3	6	**15**
Plastics & Rubber	4	2	0	3	**9**
Food Processing	4	4	22	7	**17**
No. Firms	**16**	**12**	**6**	**20**	**54**
Percentage (%)	**30**	**22**	**11**	**37**	**100**

5.21: Analysis of Non-response Error

As stated earlier the lack of accurate and sufficient data on small firms impacts negatively on the ability to analyze the extent of non-response bias. The nature of non-response is also such that values for non-respondents on all survey measures may not be available (Statistical Policy, 2001). This limits the quality of analysis that can be carried out. Nonetheless, the non-response error analysis was carried out by comparing certain characteristics of respondents and non-respondents as detailed below.

Table 5.12 below, shows the distribution of respondents and non-respondents by sector. It can be seen that there is a relatively fair percentage distribution of respondents among the sectors. However, the same cannot be said about the response rates within the individual sectors. For example out of 34 firms in printing sub-sector as many as 26 firms responded representing 76 percent response rate as against 25 firms representing 48 percent response rate achieved in respect of the metal sub-sector. The response rates of the other sub-sectors were furniture and wood processing (63 %), plastics and rubber (64%) and food processing (56%).

Table 5.12: Analysis of Respondents/Non-Respondents by Sector

Sectors	Responses		Non-Responses		Total	
	No. Firms	%	No. Firms	%	No. Firms	%
Furniture & Wood Processing	22	18	13	16	35	**17**
Paper & Printing	26	21	8	10	34	**17**
Metal Works	25	20	27	33	52	**25**
Plastics & Rubber	21	17	12	15	33	**16**
Food Processing	28	23	22	27	50	**25**
No. Firms	**122**		**82**		**204**	
Percentage	**60**	**100**	**40**	**100**		**100**

From Table 5.13 below, there were no significant size differences between the 122 firms that responded and the 82 others that did not.

Table 5.13: Analysis of Respondents/Non-Respondents by Firm Size (No. of Employees)

Size	Total		Responses		Non-Responses	
	No. Firms	**%**	**No. Firms**	**%**	**No. Firms**	**%**
Small	96	47	60	64	36	36
Medium	71	35	44	54	27	46
Large	37	18	18	59	19	41
Total	**204**	**100**	**122**		**82**	

5.22: Characteristics of Respondents

In this section the characteristics of the 122 respondents are examined as a way of testing the rigor of the sampling method used and the robustness of the data collected. In particular basic descriptive statistics on the respondents are provided. The objective to include only independent firms in this research was fully achieved.

Tables 5.14 & 5.15 show respondents by growth categories. Except for firms that saw no change (classified as stable) in their employment base all the other growth categories were fairly represented. The most represented category was the growers with 39 firms (32% of respondents). Table 5.14 provides the average growth rates of employment and sales in each of the growth categories used in this study. Average growth rates measure the average growth of firms within each growth category based on the log ratio of number of employees and sales in year 2004 to that of year 2001. Sales figures had been deflated (see Appendix 5.4). It is of interest to note that for all the four growth categories the average sales growth rates did not surpass the average employment growth rates. For the growers category the average sales growth was even lower than their average employment growth. In case of the decliners, the drop in average sales growth was higher than that of average employment growth also indicating a decrease in productivity.

Table 5.14: Analysis of Survey Respondents by Growth Category

Growth Category	No. of Firms	%	Av. Empl. Growth Rate %	Av. Sales Growth Rate %
High Growers	30	25	75	75
Growers	39	32	33	30
Stable	18	15	11	11
Decliners	35	29	-31	-38
Total	**122**	**100.0**		

This suggests that there was no overall growth in real productivity for the respondent firms during the period 2001-2004. As argued by (Barkham et al, 1996), it is important for small firms to check their productivity levels to ensure that they remain competitive. This may also suggest that these small firms were unable to quickly adjust their employment levels to reflect negative changes in sales.

Table 5.15 below, presents growth category by sector and shows that the food processing sub-sector has the highest representation of 9 firms (30%) out of the 30 firms in the high growth category.

Table 5.15: Respondents Analysis by Growth Category and Sector

	High Growers		Growers		Stable		Decliners		Total	
	No. Firms	%	**No. Firms**	%	**No. Firms**	%	**No. Firms**	%	**No. Firms**	%
Furniture & Wood Processing	3	10	6	15	6	33	7	20	**22**	18
Paper & Printing	6	20	9	23	5	28	5	14	**25**	20
Metal Works	9	30	8	21	2	11	9	26	**28**	23
Plastics & Rubber	6	20	7	18	4	22	9	26	**26**	21
Food Processing	6	20	9	23	1	6	5	14	**21**	17
No. Firms	**30**		**39**		**18**		**35**		**122**	
Percentage	**25%**		**32%**		**15%**		**29%**		**100%**	

The least represented is the furniture and wood processing sub-sector of 3 firms (10 %), with metal works, paper and printing and plastics and rubber sub-sectors having equal number of 6 firms (20%) each in this category. In the case of the growers' category all the sub-sectors are fairly represented with metal works and plastics and rubber sub-sectors having the most representation of 9 (23%) firms each, and the furniture and wood processing sub-sector again having the least number of firms being 6 (15%). The under representation of the furniture and wood processing sub-sector is not considered as any major challenge as it has one of the least number of respondents and also may be a reflection on the general performance of the sub-sector due to government control on timber resources which are the main inputs of the sub-sector.

There is only one firm in the plastics and rubber sub-sector that showed no change in its employment base over the studied period, whiles two firms were into food processing, the rest of the sub-sectors were fairly represented. All the sub-sectors are fairly represented in the declined category.

Table 5.16: Analysis of Firm Age and Average Growth Rates.

Firm Age	Employment Growth			Sales Growth		
	No. Firms	%	Avg. Growth Rate	No. Firms	%	Avg. Growth Rate
Below 5 Yrs.	25	20	42	25	21	15
Between 5 & 10 Yrs.	50	41	27	48	40	-2
Above 10 Yrs.	47	39	5	47	39	-31
Total Firms/Avg. Gr.	**122**	**100**	**22**	**120**	**100**	**-10**

Table 5.16 above, indicates the age distribution of respondent firms based on year 2000.

The table also presents the average growth rates in respect of employment and sales per the pre-determined age distribution brackets. As noted earlier, two firms did not provide data on sales. Eighty percent of the firms have operated for 5 years or more, of which 39 percent have been in operation for more than 10 years. The above table indicates a relationship between growth and age. The young firms appeared to show a higher growth rate in terms of both employment and sales. Productivity turns to suffer with an increase in age. This again may be an indication of lack of flexibility for small firms to adjust their employment levels to correspond with changes in sales.

The below Table 5.17, depicts firm size distribution and indicates that large firms (i.e. firms employing between 150 and 250 persons) are the least represented with 21 firms out of a total respondents of 122. The large firms on average achieved the least growth rates in both employment and sales of below 1 percent and negative 18 percent respectively. On the other hand small firms employing between 10 and 50 people had the highest

representation and also showed the greatest average growth rates in both employment and sales.

Table 5.17: Analysis of Firm Size and Growth Rates

	Employment Growth			Sales Growth		
Size Category	**No. Firms**	**%**	**Avg. Growth Rate**	**No. Firms**	**%**	**Avg. Growth Rate**
Small	55	45	39	54	45	8
Medium	46	38	11	45	38	-28
Large	21	17	0.48	21	18	-18
Total	**122**	**100**	**22**	**120**	**100**	**-10**

The skew ness of the respondent size distribution is not considered to be a cause of non-respondent bias, but rather is a reflection of the initial sample size distribution.

5.23:0 Data Analysis Method

In this section the data analysis method used to analyze the survey data is discussed. The discussion in particular focuses on the justification of method chosen, the associated weaknesses and the assumptions underlying the methods. SPSS statistical software package is used for the data analysis.

5.23.1: The Selection of Statistical Method

The research is mainly based on multivariate data analysis. Other non-sophisticated methods such as bivariate analysis which deals with the analysis of two variables simultaneously to ascertain their relationship (Bryman, 2001) are also used. The reason for combining both sophisticated and simple statistical methods is to resolve the problems associated with complex analysis that are difficult to understand by both researchers and

non-researchers and simple models that focus on the most important relations and neglect the others (Wiklund, 2001).

Review of literature on small firm growth suggests that many researchers rely on multivariate statistical techniques to understand factors that lead to growth (Harding et al 2004, Teal 1998, Bigsten et al 2000, McPherson 1996, Barkham et al 1996, Honjo 2004, Hart and McGuinness 2003, Wiklund and Shepherd 2003, Almus 2002). The frequent use of multivariate methods is justified on the grounds that small firm growth is affected by multiplicity of factors with complex relationships that can be sufficiently studied by the use of such techniques (Barkham, 1996). The increase in the popularity in the use of such sophisticated techniques may suggest that the complexity associated with these techniques is more than compensated for by the additional insight that they bring (Canback, 2002).

5.23.2: Multiple Regression and Multivariate Analysis of Variance (MANOVA)

There exists many different forms of multivariate techniques; however for this research multiple regression and MANOVA techniques are used. At the onset it was an objective of the study to ascertain from a large number of explanatory variables developed out of theory and the exploratory research the most influential factors that lead to small firm growth in Ghana. Multiple regression analysis which is by far the most widely used multivariate technique (Hair et al 1998) is used to examine the relationship between growth and the various explanatory factors. In short multiple regression analysis is used to achieve the following objectives:

(1) to maximize the overall predictive power of the independent explanatory variables and a set of these variables,

(2) to compare the predictive power of each set of variables (i.e. owner's characteristics, firm characteristics, business strategy and constraints) on growth of employees,

(3) to determine the relative importance of each independent variable in explaining growth factors and,

(4) to assess the kind of relationships that exist among the explanatory variables. Assessing this relationship is important for the reason that, some factors may be less relevant due to the level of correlation that exists among them in the attempt to produce the optimal prediction (Hair et al 1998).

The study had an additional objective to ascertain the extent to which constraints to growth impact differently on the pre-determined growth categories. The most appropriate method to understand group differences is the use of MANOVA (Hair et al 1998, Field 2005). Its suitability stems from the fact that it is capable of analyzing differences among more than two categorical groups.

5.23.3: Testing Multivariate Data Analysis Assumptions

Though regression analysis can produce some of the most useful information on the relationships among variables it is not without concerns and assumptions which when violated and depending on the type of violation may affect the results obtained and the conclusions that can be drawn (Albright et al 2004, Sweet and Grace-Martin 2003, Field 2005).

The following section discusses how the main assumptions have been tested and corrective actions taken where violations occurred.

Linearity

Linearity which represents the extent to which a change in the dependent variable is associated with a change in the independent variable is considered to be critical assumption in regression analysis (Hair et al 1998). When using SPSS Field (2005) reports that linearity is checked by plotting ZRESID against ZPRED and a histogram and normal

probability of residuals. Where there exists any sort of curve in the ZRESID against ZPRED graph then there is the possibility that the data does not meet the linearity assumption.

To check the linearity of the data the graph of ZRESID was plotted against ZPRED as shown in figure 5.1 below. As there is no curve in this graph it can be concluded that the linearity assumption has been met.

Heteroscedasticity

The presence of unequal variance which is considered to be one of the most common assumption violations (Hair et al 1998), is checked by examining the residual plots of the actual standardized residual values of the dependent variable against its predicted residual values (Hair et al 1998, Field 2005). The funneling out of the graph is an indication of existence of hetroscedasticity in the data (Field, 2005). From figure 5.1 shown below, the graph of predicted residuals as plotted against standardized residuals in the case of growth in employment funnels out indicating the presence of heteroscedasicity in the data. In view of this finding employment growth was transformed by using the natural log. The resulting growth in employment graph of the predicted residuals as plotted against the standardized residuals and shown in figure 5.2 below, indicates that the assumptions of linearity and heteroscedasicity have been met.

Figure 5.1

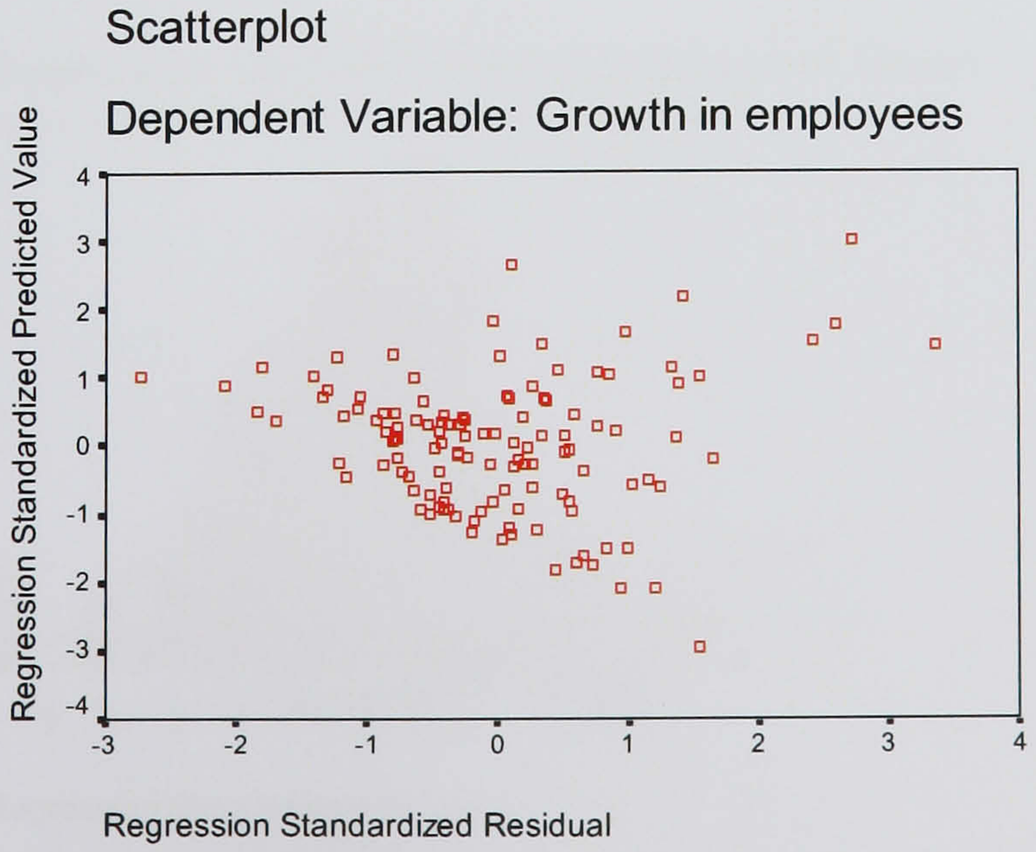
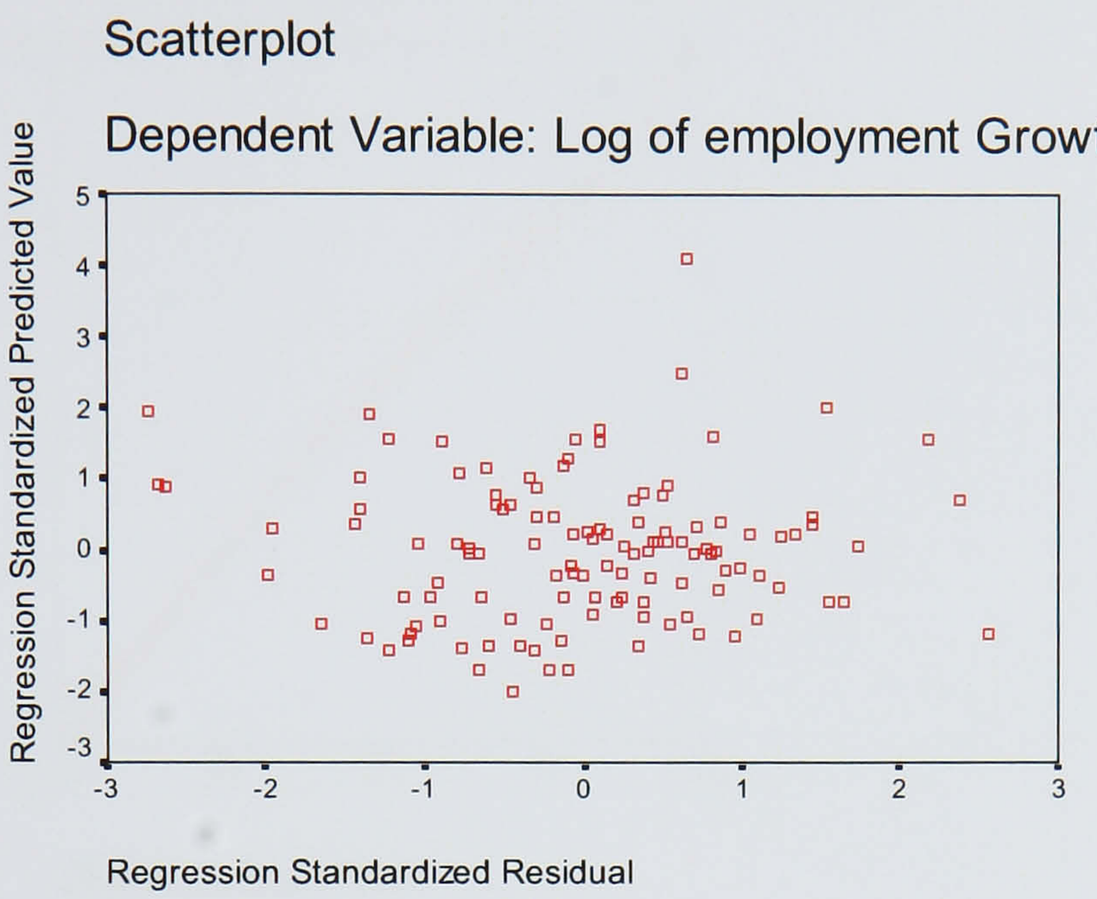


Figure 5.2



Normality

The normality of residuals is tested by having a look at the histogram of residuals and normal probability plots which should have a bell-shaped curve to indicate a normal distribution. The histogram of residuals though is simple it is less appropriate method to use in small sample size. As shown in the figure 5.3 and 5.4 below the data meet the assumption of normality.

Figure 5.3

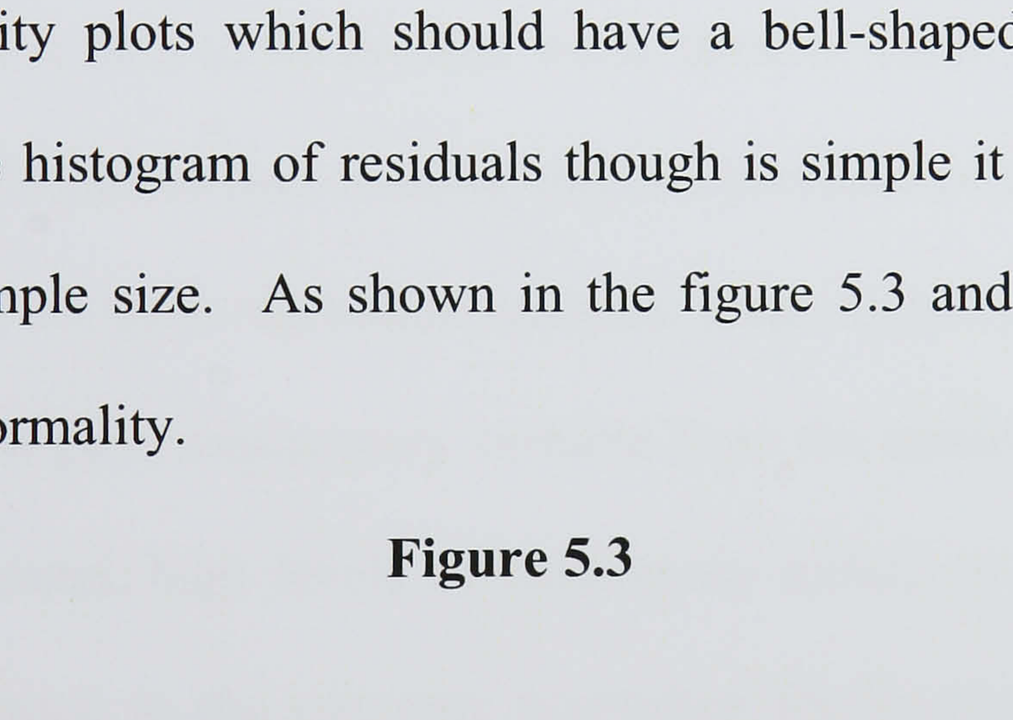
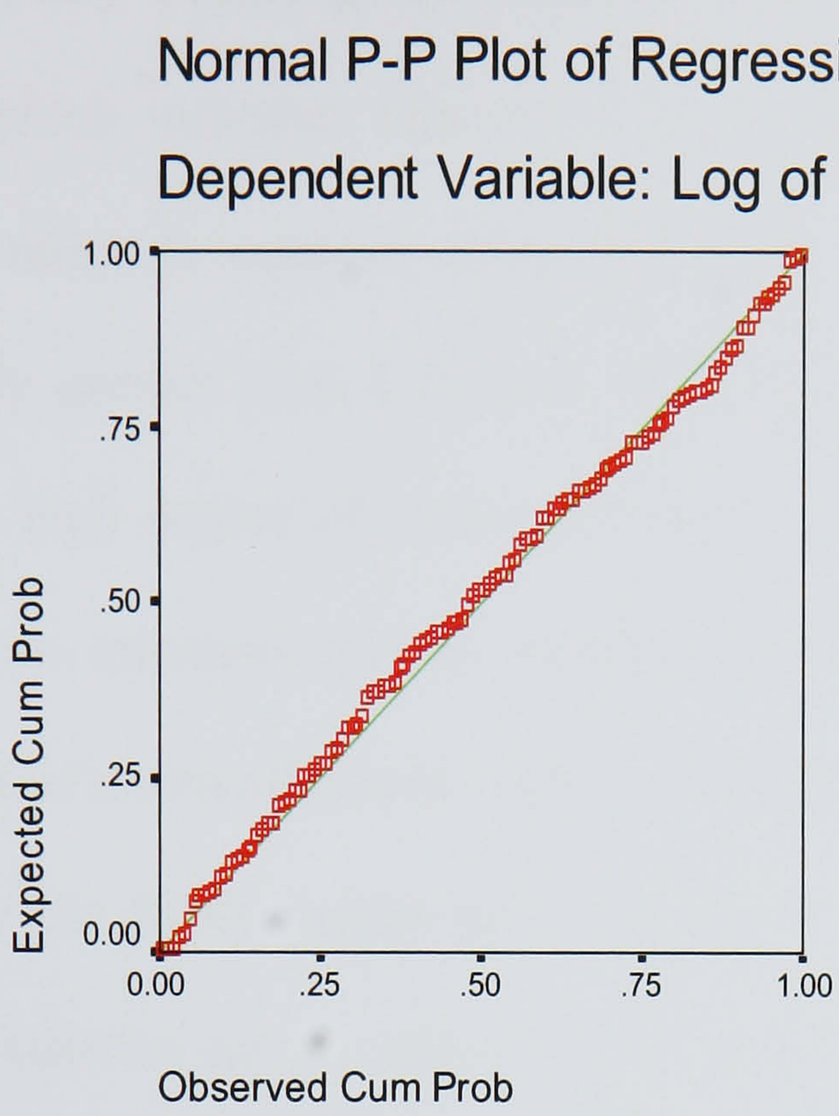


Figure 5.4



Multicollinearity

Multicollinearity is said to be present when three or more variables correlate (Hair et al 1998). Field (2005) notes four reasons why the presence of multicollinearity poses a threat to the validity of multiple regression analysis. First, high levels of collinearity may lead to the exclusion of a good explanatory variable from the model as it may be found to be less significant. Second, high levels of collinearity reduce or limit the size of R, (R is the measure of variance in the outcome accounted for by the predictors) such that having uncorrelated variables is beneficial. Third, multicollinearity reduces the chance of assessing the importance of each individual variable in accounting for the outcome. Finally, multicollinearity increases the variances of the regression coefficients, which result in unstable predictor equations.

Field (2005) provides various ways of identifying multicollinearity with a given data. The first and most basic method is to scan a correlation matrix of the variables to check for high levels of correlations. Field (2005) recommends that high correlation of above .8

should raise a concern. The weakness of this method is its inability to identify all forms of multicollinearity. SPSS however, produces various forms of identifying the existence of multicollinearity including the variance inflation factor (VIF) and the tolerance statistic. The VIF which indicates whether a predictor has a strong relationship with the other predictors raises a concern when its value is 10 or above and the average VIF is substantially greater than 1 (Myers 1990, Hair et al 1998). In effect a high VIF value indicates a high degree of multicollinearity among the independent variables (Hair et al 1998). A low tolerance statistic which is the reciprocal of the VIF (i.e. 1/VIF) indicates a high degree of multicollinearity with a recommended threshold of .1.

A check of the SPSS results indicates that the VIF values are all far below 10 and the tolerance statistics all far above .2, it can therefore be concluded that there exists no collinearity within the data obtained. The average VIF value which is computed as the sum of all VIF values divided by the number of variables for all the model are pretty close to 1 with the maximum value being 1.022. This provides further confirmation that collinearity is not of a problem for the models developed.

5.24: Reliability and Validity

Reliability and validity of the research results were given a high attention. In Table 5.18 below we present the various forms of reliability and validity and how they have been dealt with in this thesis.

Table 5.18: Elements of Reliability and Validity

Objective	Elements	Activity
Reliability	Data Source	1. Primary data source used. 2. Face to face interviews with owner/managers. 3. Questionnaire was pre-tested.
Reliability	Measures	1. Measurements were based on previous research. 2. Assumptions underlying the statistical methods were met. 3. There were only 2 missing values relating to sales in the data. 4. Cronbach's Alpha found to be within acceptable limit of .7 to .8 (Cronbach's Alpha within data = .701).
Validity	Face Validity: That construct conforms to common understanding.	1. Literature review was carried out to understand concepts and constructs. 2. Measurements, concepts and constructs were developed based on previous researches. 3. Questionnaire was developed and pre-tested with 15 owner/managers. 4. Data was collected through face to face interview ensured that as far as possible owner/managers had the same understanding of concepts, measurements and constructs.
Validity	Content Validity: That constructs covers all relevant facets of the concept.	1. Literature review provided an understanding of constructs. 2. Constructs were discussed with owner/managers through qualitative interviews and pre-testing of questionnaire.
Validity	Criterion Validity: Results are in consonance with theory and previous results.	Previous validity measures were used to determine the concurrent validity (e.g. Growth measures were based on Barkham et al, 1996).
Validity	Predictive Validity: That a measure predicts another measure as predicted in theory.	The results largely in conformity with the hypotheses (see Chapter 6).

Adapted from Maula, 2001 page 128.

5.25: Conclusion

In this chapter the research methodology and the definition of what constitutes small firm which form the basis for this study has been discussed. The use of AGI data base as the data source has been justified and the limitations discussed. The reason for favoring face to

face interview as against other data collection methods has been stated. The decision to include all firms within the sample frame for the purpose of the survey has been discussed. A review carried out indicates that there is no serious non-response bias. The use of multivariate statistical technique particularly regression and MANOVA methods have also been justified. The underlying assumptions relating to these statistical methods have been checked and it can be concluded that these assumptions have largely been met.

The subsequent chapters will discuss the research findings along with our interpretations and comparison with existing findings.

Chapter Six

Analysis of the Research Results and Findings

6.1: Introduction

In the previous chapter we discussed the research methods appropriate for the study, having regard to the research objectives set, questions to be answered and the hypotheses to be tested. Among other things we discussed the reasons for using multivariate data analysis techniques (regression analysis and MANOVA) with most of their main assumptions checked and found to have been largely met.

In this chapter we provide our empirical findings and results. In particular the discussion will centre on ascertaining the main factors that led to the growth of the small firms within the sampled data and the main barriers that hindered growth during the studied period. We will also ascertain whether the research hypotheses developed in the previous chapters are supported by the data collected and analysed.

6.2: Statistical Significance

The analysis of the research results was based to some extent on statistical significance tests; which provide evidence that the results did not occur by chance (Mclean and Ernest 1998, Suen 1992). The use of statistical significance tests is recommended in small sample studies as they provide a level of protection from reporting random results (Mclean and Ernest, 1998).

Statistical significance tests do not however, imply either practical importance of the results or results replicability (Mclean and Ernest 1998, Daniel 1998, de Vaus 2002). In view of the above limitations additional efforts were made to interpret results based on their theoretical and practical underpinnings. Other alternative methods such as the standardized coefficients and mean scores were applied as a way of measuring the importance of the research results.

Throughout this research the use of the word 'significant' unless otherwise stated implies statistically significant.

6.3: The Empirical Results

The multiple regression equation presented in Appendix 6.1 is made of up variables found to be statistically significant in determining small firm growth based on the sample data. The equation was built based on stepwise regression method. This method which starts by selecting the best predictor of the dependent variable, adds to other explanatory variables in terms of the incremental explanatory power they contribute to the regression model (Hair et al, 1998). It was used as a first step to narrow down the number of explanatory variables developed.

The method ensured that where two variables were highly correlated with each other only one of them entered into the equation though both may be highly correlated with growth. Again the method ensures that variables which on their own may provide less explanatory power, but when combined with others offer greater than anticipated explanatory power are included (Albright et al 2004).

The stepwise method however, uses mathematical criteria which may be at variance with the theoretical importance of the explanatory variables (Field, 2005).

Appendix 6.1 therefore excludes variables which were not statistically significant at a probability of less or equal to 0.05. In addition Appendix 6.1 shows the standardized regression coefficients. The standardized coefficients measure the relative importance of each explanatory variable in the model. The larger the standardized regression coefficient of an explanatory variable the greater its relative impact on growth.

The variables in the model all together accounted for 68.1 percent explanation of employment growth in respect of the sample data as indicated by the Adjusted R-Squared. The Adjusted R-Squared seeks to measure the percentage explanation provided by a

regression equation after the number of variables in the equation has been taken into consideration (Albright et al 2004, Field 2005).

Three variables within the owner/manager characteristics had statistically significant impacts on growth. Owner/managers who anticipated higher growth rates in their employment base during the studied period showed higher growth. Anticipated growth in employment as an explanatory variable accounted for as high as 39 percent of growth in employment. Owner/managers who had prior industry experience were able to grow their firms faster. 63 (52 %) of the respondents were in this category. Finally, owner/managers without prior local experience tended to achieve higher growth in employment. 28 (23 %) of the respondents indicated that they had no prior local experience before starting their own firms in Ghana.

The types of firm characteristics which were found to be significantly associated with growth in employment were the firm size and sector within which a firm operates. Firm size, based on number of employees was found to be inversely related to growth in employment as indicated by a negative standardized coefficient of 0.484. In other words younger firms grew faster than their older counterparts. Using the metal sub-sector as a base variable, variation in growth accounted for by the differences in sector was not found to be significant among the various sectors with the exception of the plastics and rubber sub-sector. The plastics and rubber sub-sector showed slower growth rate (standardized coefficient -0.106) than the rest of the sub-sectors.

Three variables relating to business strategy were found to be statistically significant in explaining growth in employment. Growth was found to be positively associated with firms that undertake to prepare business plan, or undertakes more marketing activities as well as those engaged in export. 71 firms representing 58 percent the respondents indicated that their actions are guided through business planning. In these firms growth was significantly higher. The business planning variable was associated with 19 percentage

point rise in growth. 59 (48 %) out of 122 respondents were engaged in export. These firms had a higher growth rate.

Two of the variables relating to growth constraints were found to be significant. First, competition posed by informal businesses impacted negatively on growth. This accounted for 3 percent explanation in growth. Second, late payments of bills by debtors was found to be positively and significantly associated with growth. In the case of constraining variables, respondents were asked to rank the severity of each constraint factor on growth based on a scale of 1-5 with 1 being less constraining and 5 most constraining. A positive association of a constraining factor to growth resulting from any of the regression equations therefore implied that faster growing firms are the most perceived to be affected by the impact of the 'positive' constraining variable. Thus the positive association found between delayed payment and growth implied that faster growing firms were more likely to suffer from delayed payments of bills by customers than slow growing or declining firms.

The multiple regression equation 1 shown in Appendix 6.1 provided a statistical explanatory power of 68.1 percent; it however excluded variables which have theoretical and practical significance in the explanation of small firm growth. Accordingly, other variables though found not to be statistically significant were included in the next model, which is presented as Equation 2 in Appendix 6.2 and discussed below.

The inclusion of thirteen more variables in the Regression Equation 1 did not cause any major change in the overall explanatory power as indicated in the R Squared Adjusted of 0.68 in Equation 2.

The thirteen variables included were made up of owner/manager characteristics (i.e. educational background, family entrepreneurship background, other business ownership and nationality), firm characteristics (i.e. age of the firm, all the sub-sectors excluding metal and the number of owners or partners) and business strategy (i.e. innovation

activities and training of employees). The inclusion of these variables was largely informed by existing theories and the results of the qualitative interviews conducted at the initial stage of the study.

The owner/manager level of formal education initially measured by three variables (no formal education, formal education up to advanced level or its equivalent, and university education) was reduced to two as there was no respondent without any form of formal education. 54 (47 percent) of the owner/managers indicated that they had university education. Regression Equation 2 indicates that growth was positively affected by the level of education of the owner/manager. Thus firms managed by people with university education showed higher growth.

The relatively strong family tie in Ghana was expected to positively impact on growth, that is to say owner/managers with entrepreneurial family background were expected to grow their businesses faster. The results from the data as indicated in the Regression Equation 2 supports this position. Over 70 percent (86 owner/managers) of the respondents indicated that some members of their family were into self employment.

From the outset it was considered that small firm growth would be affected by the nationality of the owner manager. It was therefore hypothesed that firms managed by immigrants are more likely to show a higher growth rate than those managed by non-immigrants. This position was confirmed by the data.

The firm age and the number of owners were found to correlate negatively with growth, albeit statistically non-significant. In other words younger firms achieved a higher average growth rate than their older counterparts. Firms with multiple ownerships achieved less proportionate share of growth in employees for the studied period.

In view of the trade liberalization policies implemented over a decade ago in Ghana it was expected that firms would adopt innovative activities aimed at increasing their competitive positions in the local market so as to meet the challenges imposed by outside competition.

Our findings in respect of the three measures of innovative activities were that, growth was positively affected by the frequency of (a) adding new products and, (b) undertaking product improvement. These variables had varied relative importance on growth with process innovation having the highest impact as indicated by their respective standardized regression coefficients shown in Equation 2. Product improvement had no influence on growth. Process innovation was also found to be the most frequent innovative activity used by the owner/manager interviewed with a mean score of 3.63 (product innovation 2.35 and product improvement 2.93) based on a 5-point scale measuring how frequently each of these activities were undertaken.

Though all the three forms used to measure training activities had positive and insignificant relationships with growth, it was decided that informal training measurement was the only one to be included in Equation 2. This was based on the fact that informal training is largely associated with small firms (The Nottinghamshire Research Observatory, 2002a). Again informal training provided the highest explanatory power compared to the other two forms of training variables used in the study. The impact of informal training on growth as indicated by its standardized regression coefficient reduced from 0.039 to 0.010 when the other forms of training were excluded from the equation. Thus, to obtain the real impact of informal training on growth, the effects of other forms of training on growth should be held constant. In other words the combination of the various forms of training had a higher positive impact on growth than the use of informal training alone.

6.3.1: Multiple and Single Impact of Variables

Using multiple regression means that the effects of other variables on growth are held constant in order to ascertain the 'true' effect of each variable on growth (Field 2005, Hair et al 1998). Following Barkham et al (1996) the 'true' effect of each variable within the

multiple regression equation were compared with the respective strength of the relationship between each of these variables and growth when the other factors' predictive effects were removed from the equation.

The purpose of this procedure, as argued by Barkharm et al (1996), was to provide the basis for comparison of the multiple and single regression methods as some researchers continue to rely on the latter for their analysis.

A small statistical significance value, a high standardized coefficient and a high contribution to R Square are all indicators of a relatively high importance of a factor (Field 2005, Hair et al 1998).

In Appendix 6.3 the relative contribution of each variable is presented as a way of measuring their relative importance in explaining growth. The individual factor's contribution in the explanatory power within the multiple equation was compared to their respective power when the impacts of all other variables were omitted (i.e. single regression equation). The change in the Adjusted R Squared for the multiple regression equation has been arrived at by using the 'stepwise' method. Those variables found to be non-significant by using the stepwise method but due to their theoretical background had to be included, were introduced into the equation in turn.

Except for the growth orientation variable which remained significant in both equations, the contributions of other variables varied. In the case of variables such as local experience and informal training their contributions increased when combined with other variables. On the other hand the explanatory power of factors like formal planning, owner/manager experience in related firm and owner/manager level of education increased when the effects of other variables were omitted. This finding confirms the position that small firm growth is influenced by a wide range of variables that interact among themselves.

Appendix 6.3 also indicates that more than half of the explanation for growth was accounted for by the intention of the owner/manager to grow the business. The remaining

30 percent of the explanation was attributable to the other twenty two factors with an average contribution of less than one and half percentage points. This again was an indication that small firm growth is affected by a wide range of factors.

6.3.2: Regressing Variables Under: Owner/Manager Characteristics, Firm Characteristics and Business Strategy Variables

In this section we analyze the individual factors separately within their broad categories (i.e. Owner/manager characteristics, firm characteristics and business strategy). Such an analysis as argued by Barkham et al (1996) provides further useful insights into the kind of interrelationships that exist among the variables. This was done by regressing each category of variables separately such that the impact of the other category of variables is removed. The resulting equations are provided and discussed below.

In Appendix 6.5 only those variables relating to the owner/manager characteristics were regressed against growth. The overall explanatory power of this group of variables was found to be high, as shown by an Adjusted R Squared of 0.439. In other words the equation explains about 44 percent of the variation in growth, when the effects of the firm characteristics, business strategy and constraint variables are removed.

The impact of some of the owner/manager characteristics increased when combined with factors relating to the firm characteristics and the kind of business strategy pursued by management. The most notable among these were the factors relating to the experience of the owner/ manager. One of the most interesting findings was that the nature of the relationship that existed between growth and prior local experience changed when the effects of firm characteristics and business strategy variables were omitted. Firms managed by people with local experience grew slower when the effect of firm characteristics and business strategy were held constant (standardized coefficient -0.163 see Equation 2). However, when the impact of firm characteristics and business strategy variables were

removed from the equation the opposite was the result, (i.e. standardized coefficient became positive see Appendix 6.5). The most plausible explanation could be that local experience was sector dependent. That is to say, for a firm to experience growth arising from whether the owner/manager has prior local experience or not depended on the sector that the firm operated. Further analysis indicates that local experience had a negative correlation with both furniture and wood, and plastic and rubber sub-sectors.

On the other hand the impact of growth orientation and education statistically reduced when regressed together with firm characteristics and business strategy variables. This implies that a firm needed to adopt certain strategies in order to achieve its intended growth. Again intended growth was easier to achieve in certain sectors than the others or that growth rates could have been affected by age of the firm or its size.

The impact of nationality though statistically not significant in both situations, changed when the effect of firm characteristics and business strategy variables were removed. The advantages enjoyed by immigrants in growing their firms were possibly limited to differences in sectors, the firm size and age, as well as how the firm was managed (i.e. the kind of business strategies pursued by the owner/manager).

The firm characteristics variables in Appendix 6.6 on their own provided relatively small explanatory power in the determination of factors leading to the growth of these small firms (R Squared Adjusted= 0.198). The differences in sectors were less important on their own or when regressed among factors such as the firm size, the age of the firm and the number of owners. The sector variables had little effect on growth even when characteristics of the owner/manager as well as business strategy variables were excluded from the equation. However, firm size was important whether on its own or when combined with other characteristics of the firm variables.

The impact of 'multiple' ownership though significant, reduced when the influence of other variables on growth within the firm characteristics were held constant. The inclusion

of factors relating to the owner/manager and business strategy eliminated the significance of 'multiple' ownership on growth. Overall the significance of the variables relating to the firm characteristics except firm size reduced drastically when the effects of all the other variables were held constant. This implies that those factors relating to the owner/manager and or the strategy adopted by management to achieve growth were the most important.

Three business strategy variables (business planning, marketing, and process innovation) were found to be significant when the impacts of the owner/manager characteristics and the firm characteristics variables were removed (see Appendix 6.7). The most important of these was business planning measured by either a firm had a written business plan or not. This factor was found to be significant on its own as well as when the effects of other business strategy variables were controlled within the equation. The significance of marketing reduced when the impact of the characteristics of the firm and that of the owner/manager was omitted.

Surprisingly, innovative activities did not play any statistically significant role in explaining growth during the studied period with the exception of process innovation. With process innovation its impact was significant only when regressed alone; it reduced when combined with other business strategy variables and was eliminated with the inclusion of the firm and owner/manager characteristics.

The internationalization of the firms through export had significant influence on growth in all the three regression equations. One important observation however, was that export had a negative impact on growth when the effects of the firm and owner/manager characteristics were removed. The best possible explanation could be that a firm's international competitiveness was determined mainly by the sector that it was located, and/or certain owner/manager characteristics such as level of education, international experience and nationality.

The explanatory power of business strategy variables though was relatively higher than that of firm characteristics, ranked lower when compared with owner/manager characteristics variables.

The regression equations provided further confirmation that owner/manager characteristics variables taken individually or as a group had the most explanatory power in determining what led to the growth of these small firms. It was found that firms owned and managed by entrepreneurs who had a high growth intention achieved higher growth.

It is important to note that any attempt to provide the best model that seeks to explain growth of these firms during the period 2001-2004, should include mainly the owner/manager characteristics variables and some other factors relating to the firm characteristics and business strategy as well as a few constraint factors. This coincided with our expectation that growth is influenced by a large range of variables which interact.

6.3.3: Variables Excluded

Out of the 72 variables generated, more than 71 percent were found to be less important in explaining growth. The full list of these variables is presented and attached as Appendix 6.8. Some of these variables did not enter the regression equation 2 (equation 2 is the most comprehensive of all the equations) because other alternative measure had been used. For example one of the two measures of growth orientation (i.e. anticipated growth in employees and anticipated growth in turnover) became non-significant when these two measures were included in the equation simultaneously. Anticipated growth in employees was the preferred option because our measure of growth was equally based on number of employees. Many other variables however were not influential for different reasons.

A number of owner/manager characteristics were found to be less influential in explaining growth. The most notable among these were the age of the owner/manager and, how ownership was acquired, as well as the owner/manager years of experience and managerial

experience. It is important to note that the owner/manager's years of experience and managerial experience had negative relationships with growth albeit statistically insignificant. This was an indication that the kind of experience that led to growth was the one which was directly related to a firm's operation. The entrepreneur's age measured in years was found be inversely related to growth but statistically non-significant, which meant that younger entrepreneurs grew their firms faster.

Certain business strategies were found to have been less important factors influencing growth. Notable among these were cost competitiveness, large scale production and staff development through external training. The extent of the owner/manager's involvement in the running of the business was surprisingly less relevant to growth. Whiles for some of these variables their wide application may reduce variation in growth among these small firms and therefore did not enter into any of the equations, for others it may be a simple matter of wrong application.

6.4.0: Constraint Variables

The fact that only two out of the twenty one constraint variables listed had influential impact on growth was by no means an indication that the growth of these firms had not been hampered by the excluded constraint variables. The effects of these variables possibly were widely spread such that they became less of discriminating factors in our attempt to study growth. It was therefore important to ascertain the extent to which the constraining factors impacted on growth of these firms based on different growth rates, sectors and size categories. Another useful analysis was to ascertain which of these variables had the most severe constraining effect on growth during the studied period.

At the onset it was our view that one of the most influential groups of factors that determine growth will be constraints faced by the small firms. Our position was based on existing small firm growth theories in LDCs (Baah-Nuakoh 2003, Bartleet and Bukvic

2001, Goedhuys and Sleuwaegen 1999, Aidis 2003, Tybout 1998) and the results of the qualitative interviews conducted. In this regard a number of factors were identified as having the potential to limit growth during the studied period out of existing literature and the results of the exploratory research. The full list of these factors is shown in Table 6.1 below. Included in the twenty one variables were ten which related to institutional barriers. The remaining eleven were either macro or micro environment variables. The respondents were asked to rank on a 5 point scale the importance of these factors to growth (with 1 indicating not important, 2 little important, 3 important, 4 very important and 5 extremely important). With no additional constraint variable suggested by the respondents it can be taken that the list was comprehensive enough for the study.

Table 6. 1: Analysis of Constraints to Growth Variables

	Mean Score Total
Cost of Borrowing	3.99
High Cost of Inputs	3.57
Lack of Trust & Honesty	3.46
High Bureaucracy	3.4
Lack of Credit	3.35
Late Payments	3.34
Inefficient Support System	3.15
Competition- Imports	2.99
High & Inefficient Tax	2.98
Informal Competition	2.84
High Inflation Rate	2.78
Inefficient Technology	2.66
Corruption	2.55
High Devaluation Rate	2.47
Unskilled Labour	2.40
Lack of Demand	2.20
Transparency	2.06
Inefficient Legal System	1.62
Contract Enforcement	1.62
Property Right	1.56
Political Persecution	1.18

The data did not support our initial view that constraints were one of the most influential groups of factors affecting growth as indicated in all the regression equations presented above. However, there were a number of constraining factors that were perceived by the owner/managers as having hampered growth during the period 2000-2004. With the highest mean score of 3.99 and the fact that seven (33 %) out of the twenty one constraint variables had mean scores in excess of 3.0, it can be said that growth was to a large extent limited by at least some of these constraints, albeit statistically non-significant.

It is of great importance to note that we obtained data relating to a period (2000-2004) which witnessed a relatively stable economic and political environment. As this period was immediately succeeding another period that can be described as a highly unstable, it is possible that the owner/managers' perceptions might have been influenced by what happened before the studied period. Another problem with the use of survey data is that owner/managers who may have varied perception about a constraint arising from factors such as their international experience may rate equivalent obstacles differently (Beck et al, 2002).

As shown in Table 6.1, cost of borrowing emerged as the most perceived factor that constrained growth, with a mean score of 3.99 out of a maximum score of 5.0. The number of owner/managers who perceived cost of borrowing as either a very or extremely important factor that hampered growth was 92 (47 very important and 45 extremely important) representing 75 percent of the respondents. The next most constraining factor was high cost of inputs (mean score 3.57) followed by lack of trust and honesty (mean score 3.46). 62 (43 %) firms scored high cost of input as very important with an additional 13 (11 %) ranking the variable as extremely important. In the case of lack of trust and honesty 43 (35 %) and 24 (20 %) of the owner/managers considered that it was a very and an extremely important in that order.

Out of the seven most constraining factors with mean scores exceeding 3.0, three were macro environment variables (cost of borrowing, high input cost and lack of credit) and a factor (lack of trust and honesty) relating to the micro environment. Two of these factors were formal institutional barriers (high bureaucracy and lack of efficient support system). The remaining variable was an informal institutional barrier (late payments). On the other hand all the four least constraining variables (mean scores less than 2.0) were institutional factors with three (i.e. inefficient legal system, lack of contract enforcement and property right) being formal barriers to growth and the least of all being political persecution. In respect of each of the three least perceived constraints mentioned above more than 80 percent (contract enforcement 81 %, property right 84 % and inefficient legal system 83 %) of the respondents perceived their impacts as either not importance or of little importance, whiles less than 10 percent considered that they were very to extremely important in each case.

6.4.1: Analysis of Growth Constraints by Firm Growth Categories

It was an initial objective of the study to ascertain whether the constraint variables had somewhat equal impacts across growth categories. This section therefore seeks to analyse how the perceived barriers had impacted on the four growth categories applied through out the study (i.e. high growth, growth, stable and decliners).

As indicated in Appendixes 6.9a and 6.9b out of the total twenty-one constraint variables ten had mean scores exceeding 3.0 for the high growers with the most perceived constraint being cost of borrowing (mean score 4.26). Within the 27 firms classified as high growers more than 85 percent (23 firms) reported that cost of borrowing was either a very or extremely important constraining factor to growth, with one person or no person indicating that the factor had no and little impact on growth respectively.

The next most important variables were high cost of inputs and competition arising from imported products both having mean scores of 3.67 each. Regarding high cost of inputs; 16 firms representing 59 percent of the high growers were of the opinion that the factor was either very important or an extremely important constraint to growth, with an additional 9 (33percent) firms indicating that it was important. Lack of trust and honesty, late payments, lack of credit and high and inefficient tax system were also perceived as having had some constraining effects on the high growers. The rest were inefficient support system, high bureaucracy and high inflation rate in that order.

The 5 least perceived factors reported by the high growers were impact of political persecution, lack of contract enforcement, property right, inefficient legal system and lack of transparency in contract awards, all being institutional factors. These variables had mean scores ranging from 1.22 to 1.96. Political persecution was perceived to be the least important constraint with 26 firms out the 27 high growers ranking the factor as either having no impact or having little impact. In fact 23 firms representing 85 percent of this category of firms reported that the factor was not important to growth.

Appendix 6.9a again presents how firms within the growth category perceived the impact of the barrier variables on growth. Unlike the high growers, six variables had mean scores exceeding 3.0 with the highest being 3.56 which related to high cost of borrowing. Like the high growers, high cost of inputs was the second most perceived important barrier to growth but with a lower mean score of 3.42. Lack of trust and honesty, lack of credit and competition from imported products as well as late payments were also mentioned as having relatively high constraining effects on growth.

Again the five least barriers perceived as important to growth by the owner/managers were those relating to institutional factors namely, impact of political persecution, inefficient legal system, property right, lack of contract enforcement, and lack of transparency in contract awards with mean scores ranging from 1.18 to 1.82.

Firms which achieved growth rates of less than 20 percent for the studied period were classified as stable. The three most constraining factors to growth for these firms like their high growers and growers counterparts were cost of borrowing, lack of trust and honesty and high cost of input, though the perceived severities of these factors as measured by their mean scores differed among the groups. The owner/managers of the stable category reported nine factors as having mean scores of 3.0 and above. The growth rates of the stable firms were hampered by additional variables aside those mentioned in the case of the growth and the high growth categories.

Whiles the owner/managers of firms that achieved growth rates exceeding 20 percent for the studied period perceived factors such as competition from imported products and late payments by debtors as relatively high constraints to growth, the stable firms perceived factors such as lack of skilled labour and competition from informal businesses as additional important constraints.

Firms that achieved negative growth rates had the highest number of constraining variables with mean scores of 3.0 or higher. In fact eleven factors were in this category. All the factors considered as having had the most constraining impact on growth among the growers and the non-growers alike were also reported by the firms that experienced negative growth rates. Another finding though not surprising, was that the perceived severities of the most common barriers were of the highest within the decliners' group as indicated by their higher mean scores.

Finally all the various growth groups perceived institutional factors such as, impact of political persecution, inefficient legal system, property right, lack of contract enforcement, and lack of transparency in contract awards as having had the least constraining effects on growth during the studied period.

6.4.2: Analysis of Growth Constraints by Sub-Sectors

In Appendixes 6.10a and 6.10b, we set out the growth constraints by sectors. High cost of borrowing was found to be the most constraining factor among all the five sub-sectors with varying degrees of importance. Overall only 9 firms (9 %) indicated that high cost of borrowing was not important or of little importance in determining growth during the period.

Firms engaged in paper and printing were the most affected by the perceived high cost of borrowing with a mean score of 4.19. Indeed only one firm indicated that the high cost of borrowing was not important, with the remaining twenty firms within the printing sub-sector indicating that the constraint was important, very important or extremely important. The other most widely perceived barriers to growth such as high cost of inputs, lack of trust and honesty, late payments, inefficient support system, and lack of credit, cut across all the sub-sectors. The furniture and wood processing sub-sector appeared to be affected by the least number of the high constraining factors. Using a mean score of 3.0 and above the furniture and wood processing sub-sector reported of six most constraining factors with an average mean score of 3.46. This was in contrast with the metal sub-sector which had nine most constraining factors with an average mean score of 3.36. The obvious implication was that the metal sub-sector may have been affected by a larger number of barriers but with somewhat less individual constraining effect compared to the furniture and wood processing sub-sector, with less number of highly severe constraints. The respective number of the most widely perceived barriers and the related average mean scores for the other sub-sectors were: food processing 8 (average mean score 3.56), paper and printing 10 (average mean score 3.43) and plastics 10 (average mean score 3.59).

The above analysis indicates that the plastics sub-sector was the worst affected by these perceived barriers to growth. This finding was in contrast with the previous finding that the plastics sub-sector had the highest percentage of firms (15 out of 21 firms representing 71

%) that achieved growth rates exceeding 20 percent during the studied period. On the other hand the furniture and wood processing sub-sector which reported the least number of high constraining factors, had no more than 9 firms (41 %) that achieved growth rates of 20 percent and above for the studied period. These findings confirm our earlier one that growth was more sensitive to owner characteristics, firm strategy and firm characteristics than barriers to growth variables.

6.4.3: Analysis of Growth Constraints by Firm Size

The most obvious differences between firm size and barriers to growth were related to cost of borrowing, lack of credit, impact of corruption and high bureaucracy (see Appendix 6.11). Cost of borrowing though was considered to be the most important factor that constrained growth, its degree of impact was perceived differently among the three firm size groupings. The constraining effect of high cost of borrowing was most widely perceived among the large firms (mean score 4.10) followed by the small firms (mean score 4.05) and then the medium firms (mean score 3.87). This follows the fact that within the large firms 20 (95 %) out of the 21 firms perceived cost of borrowing as an important to extremely important factor impacting on growth. The comparative figures were: medium 42 (91 %) out of 46 firms and small firms 49 (89 %) out of 55 firms.

The above finding however, differed from that of lack of credit as a constraint. The impact of lack of credit was perceived as a more important factor among the small firms (mean score 3.56) than large firms (mean score 3.19) and a more important to the large firms than the medium size firms (mean score 3.17).

The impact of corruption was directly related to firm size such that the large firms complained the highest (mean score 3.33) about its impact on growth, followed by medium firms (mean score 2.52). The small firms considered the impact of corruption to be less important with a mean score of 2.27.

High bureaucracy happened to be the second highest important perceived constraint variable in the case of both the large firms (mean score 3.62) and the medium firms (mean score 3.7). It was also somewhat important to the small firms but at a lower mean score of 3.07 and the ninth most important factor.

6.5: Hypotheses Testing

Following the above discussions which centred on the research results, we ascertain the extent to which the data supports the hypotheses developed in the previous chapters. The discussions are grouped into the owner/manager characteristics, the firm characteristics and the business strategy and the constraints to growth.

6.5.1: The Owner/Manager Characteristics

In order to understand properly how the owner/manager characteristics influence small firm growth in LDCs, we set out a research question and related hypotheses which are restated below for ease of reference.

Research Question:

Which characteristics of the owner/manager have significant impact on small firm growth in LDCs?

Hypotheses:

(H1A) Growth is significantly and positively influenced by the fact that a firm is managed by an owner/manager with a higher growth aspiration.

The hypothesis was confirmed by the data. Growth aspiration variable measured by intended percentage growth in employment for the studied period was positive and significant even at 1 percent level of significance in all the equations and contributed more than half of the explanatory power.

(H1B i). The level of education of the owner/manager is expected to have a significant and positive relationship with growth.

(H1B ii). Prior related industry experience is expected to have a significant and positive relationship with growth.

The level of education of the owner/manager had a significant influence on growth at 5 percent significance level but only within the single regression equation. In the case of related firm experience however, our finding was significant at 1 percent level of significance in all the equations.

H (1C) Growth is positively and significantly influenced by an entrepreneurial family background (i.e. firm managed by owner/manager who has a family entrepreneurial experience is more likely to achieve higher growth).

The hypothesis is confirmed, but significant at 5 percent significance level only within the single equation.

H (1D) Growth is negatively and significantly influenced by the fact that the owner/manager owns several firms.

The hypothesis is confirmed. However, the results were not statistically significant at 5 percent significance level in all the equations.

H (1E) Growth is positively and significantly influenced by the fact that the owner/manager is an immigrant.

The hypothesis is supported but statistically non-significant at 5 percent level of significance in all the equations.

6.5.2: The Firm Characteristics

The following research question and hypotheses were developed in the attempt to determine the extent to which the characteristics of the firm impact on growth.

Research Question:

What are the major characteristics of the firm that impact on growth?

Hypotheses:

H (2A). Growth is influenced by the sector within which a firm operates (e.g. firms operating within the metal sub-sector will show the highest growth rate).

The hypothesis was confirmed. Using metal sub- sector as the base dummy variable all the other sub-sectors achieved slower growth rates. However the negative influences of these sub-sectors on growth were statistically non-significant at 5 percent level of significance except in the case of the plastics sub-sector.

H (2B). Growth is directly and significantly influenced by the size of a firm.

The hypothesis was not supported by the data. Size was rather found to be inversely related to growth, (i.e. small firms were found to have enjoyed higher growth rates than the larger firms). This finding was significant in all the equations even at 1 percent level of statistical significance.

H. (2C) Growth is positively and significantly influenced by the age of a firm.

The hypothesis was not confirmed. Firm age was found to be negatively associated with growth. Younger firms grew faster than their older counterparts but statistically significant only when the effects of all the other variables are omitted from the equation.

H. (2D) Growth is negatively and significantly influenced by the fact that a firm has several owners (i.e. firms with multiple ownership are less likely to achieve high growth).

The hypothesis is confirmed. The influence of the number of owners on growth was found to be significant at 1 percent level of significance in two of the regression equations. First when the effects of all the other variables were omitted and second with the impacts of owner/manager characteristics and business strategy variables were omitted.

6.5.3: Business Strategy

To assess the kind of business strategies that owner/managers of small firms adopt to achieve growth, the following research question was to be answered.

What kind of business strategies adopted has significant influence on small firm growth in LDCs?

To answer the above research question the following hypotheses were to be tested.

H (3A). The level of importance placed on marketing activities will positively and significantly influence growth.

Using marketing expense incurred as a percentage of sales to measure the level of marketing activities, the data confirmed the above hypothesis. The influence of marketing activities on growth was important at 1 percent level of significance in all the regression equations.

H (3B). The level of importance placed on innovative activities will positively and significantly influence growth. In particular firms that show importance to: (a) new product introduction (b) improvements in existing products or (c) process innovation are more likely to achieve higher growth.

Growth was found to be positively associated with (a) the frequency of new product addition, (b) the frequency of improving product quality and (c) the frequency of improving the production process. However these measures of innovation were found to be statistically non-significant. Product improvement had no influence when all the other variables are included in the equation (see equation 2 of Table 6.2).

H (3C). Growth will be positively and significantly influenced by the fact that a firm is engaged in export.

The data supported this hypothesis. Export had a significant and positive impact on growth at 5 percent level of significance in all the equations except where the impacts of owner/manager characteristics and firm characteristics variables were omitted.

H (3D). Growth is positively and significantly influenced by the fact that a firm is engaged in formal planning.

The hypothesis was confirmed when formal planning is measured by the fact that the firm prepares annual budget. This finding was significant at 1 percent level of significant in all equations. On the other hand growth was rather negatively correlated with preparation of business plan, though not statistically significant.

H (3E).Growth is positively and significantly influenced by the fact that a firm is engaged in training and skills development of employees.

The hypothesis was confirmed but non-significant at 5 percent level of statistical significance by using informal training as a measure of training and skills development.

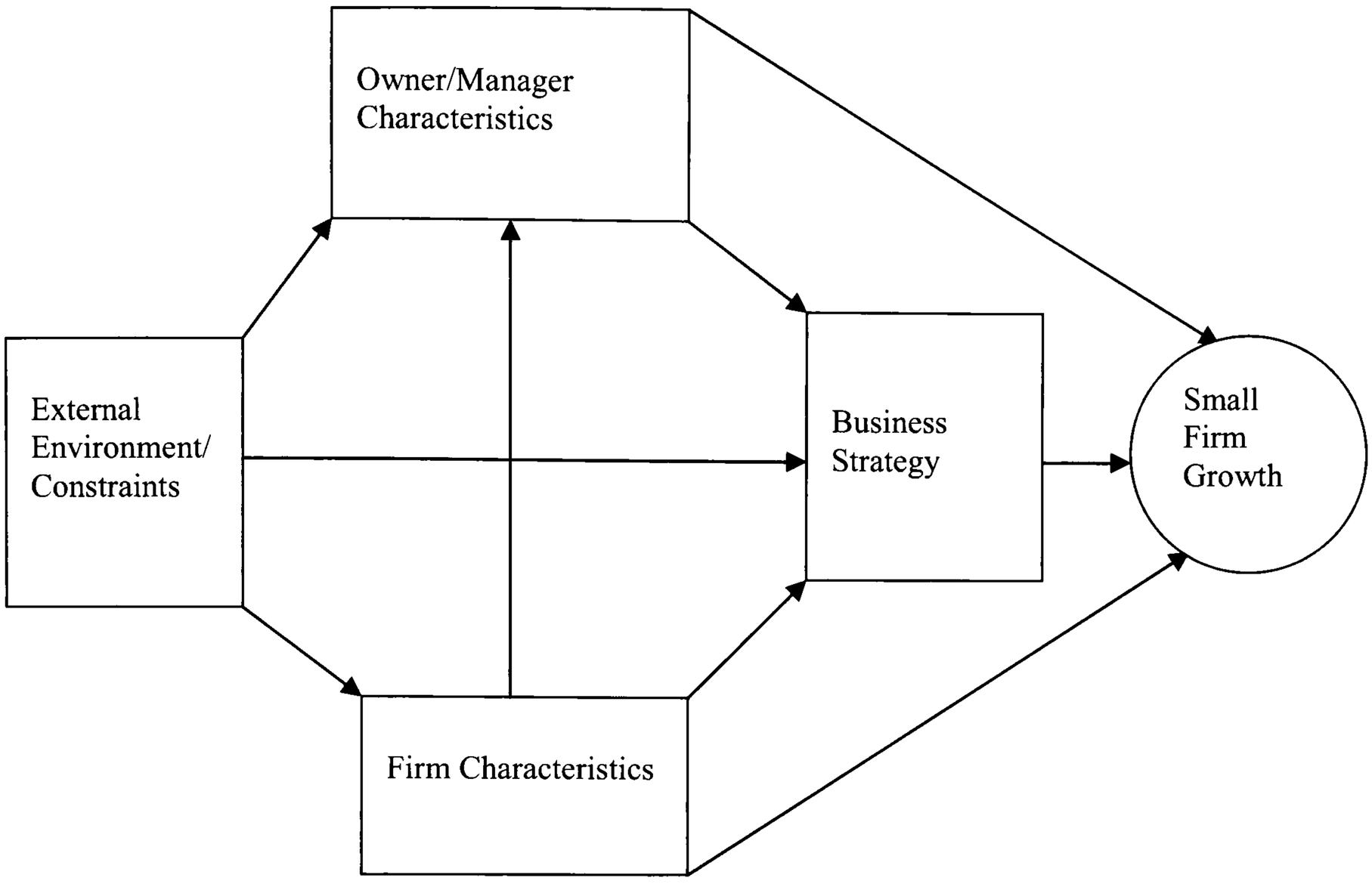
6.6: Confirmation of Research Model

Figure 6.1 summarizes the main research findings and provides that growth is affected directly by owner/manager characteristics, firm characteristics and the business strategy pursued by the firm. It was observed that the constraint variables on their own provided less than 8 percent explanation of factors that led to the growth of these small firms as indicated by an adjusted R Squared of .079 when the constraint variables were regressed alone. Out of the twenty one constraint variables it was only informal competition that had direct and significant impact on growth when the effects of other variables were omitted. In essence, the effects of the perceived constraints on growth were dependent on the owner/manager characteristics, firm characteristics and business strategy. That is to say the

external environment remained general, and only affected growth depending on the owner/manager's growth orientation, experiences, nationality as well as the sector that the firm was located, and the age and size of the firm. Finally, strategies such as marketing, export, innovation, planning and training correlated significantly to increase or reduce the constraining effect of the external environment on growth. Appendixes 6.12-6.14 provide the correlation coefficients showing the relationships between some of the constraint variables and the growth factors that were found to be significant. In Appendix 6.12 for instance firms were able to minimize the effect of cost of borrowing through high innovation activities; high staff training that might have increased productivity. High level of business planning had a significant effect in reducing the impact of high cost of inputs and access to credit. The impact of informal competition had a negative and significant relationship with export, process innovation and business planning. This implied that firms faced with high level of informal competition increased their export and innovation activities among other things to continue to achieve growth.

The indirect impact among owner/manager characteristics, firm characteristics and business strategy had been explained in section 6.3.2.

Figure 6.1 Revised Small Firm Growth Model in LDCs



6.7: Conclusion

By using multivariate regression analysis we found about 68 percent explanation for factors that led to the growth of the small firms within the data set obtained. Our conclusion is that except for the owner/manager's growth aspiration which accounted for more than half of the growth explanation, there is other wide range of variables which interact to propel small firms to achieve higher growth.

It is our view that whiles the motivation of the owner is highly important in the determination of small firm growth; it is not sufficient condition for growth to occur. That the personal ability of the owner/manager, availability of resources and the kind of business strategy adopted as well as the firm's own characteristics are all important and not just the owner/manager's desire to grow.

Firms that achieved higher growth rates were those owned and managed by people with industry specific experience, highly motivated to make money, and with international

experience. Owner/managers with high level of education and with entrepreneurial family background as well as those who focused on a single line of business enjoyed higher growth. Firms owned and managed by immigrants also showed higher growth.

The size of a firm was found to play a major role in the determination of small firm growth, such that the small firms attained higher growth rates than their larger counterparts. Younger firms were also found to grow faster, whiles multiple ownership was found to be detrimental to growth.

The most influential business strategy variables that were found to be positively associated with high growth were; marketing and formal business planning. Innovative activities and, staff training and development had positive impact on growth, however, were of little influence.

The two most constraining factors that were statistically significant in influencing growth were; informal competition and late payments of bills. There was however a number of other constraints that were highly and widely perceived as hampering growth. These included but not limited to lack of credit, high cost of inputs, and lack of trust and honesty, as well as high bureaucracy.

Whiles in the subsequent chapters effort will be made to offer explanations to the above results, attempt will also be made to compare our findings with some of the previous ones as a way of gaining further insight into the factors that lead to small firm growth in LDCs.

Chapter Seven

The Owner/Manager Characteristics and Growth

7.1: Introduction

In the previous chapter, we examined a number of factors that theoretically and practically influence small firm growth. Having regard to our data set, we observed that the owner/manager characteristics that have significant and or practical impact in growth determination were; the owner/manager growth aspiration, prior industry experience, local experience, education, family background, nationality and other business interests. In this chapter we aim to provide a more detailed explanation of how the significant variables on their own influence growth, as well as how they interact among themselves and with some firm characteristics and business strategy variables to affect growth. We will also compare our results against wider literature on small firm growth. The impact of nationality though was not found to be significant is included in the discussion due to its theoretical and practical underpinnings.

Table 7.1: Owner/Manager Characteristics-Hypotheses Tested

Hypotheses	Impact on Growth	Test Results
(H1A) Growth is positively and significantly influenced by the fact that a firm is managed by an owner/manager with a higher growth aspiration.	Positive	Positive and significant.
(H1B ii). Prior related industry experience is expected to have a significant and positive relationship with growth.	Positive	Positive and significant.
H (1E) Growth is positively and significantly influenced by the fact that the owner/manager is an immigrant.	Positive	Positive not significant

In Table 7.1 above we present the hypotheses and test results of owner/manager characteristics variables found to be significant or important for further discussion in this chapter.

7.2: Growth Aspiration

The role played by the growth aspiration of the owner/manager in influencing small firm growth has been widely studied (Barkham et al 1996, Storey 1994, Bridge et al 2003, Wiklund and Shepherd 2003, Smallbone et al 1995, Orser et al 2000).

In the light of the relatively high explanatory power offered by growth aspiration variable used in this study, we provide further analysis so as to adequately understand its impact on growth.

It should be noted that our results can be biased due to the fact that data was obtained after the fact. The owner/managers may have possibly provided different answers if they were asked the same questions about their business growth intention before the fact. While it is generally agreed that growth aspiration leads to growth, there is also a common agreement that not all small firm owner/managers seek growth.

Table 7.2: Analysis of Anticipated Growth by Growth Category

Anticipated Growth.	**High Growth**		**Growth**		**Stable**		**Decliners**		**Total**
	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms	%	No. Firms
No Growth	0	0	3	9	5	15	25	76	**33**
1-10% Growth	9	21	17	40	10	23	7	16	**43**
11-20% Growth	12	41	12	41	3	10	2	7	**29**
21-50% Growth	5	56	3	33	0	0	1	11	**9**
Above 50% Growth	4	50	4	50	0	0	0	0	**8**
Total	**30**	**25**	**39**	**32**	**18**	**15**	**35**	**29**	**122**

As shown in Table 7.2 above, of the 122 respondents, 33 (27 percent) had no intention to increase their employment base over the studied period. Twenty five firms representing 76 percent of these firms actually experienced negative growth in employment during the period. The 8 firms which anticipated achieving employment growth rate of above 50 percent were equally divided between the high growth and the growth categories. For ten other firms the owner/managers' growth intention notwithstanding, actual growth was not achieved. The fact that thirty three (27 percent) of the respondents had no growth aspiration, confirms some existing findings in the advanced world that not all small firm owner/managers will pursue growth (Barkham et al 1996, Storey 1994, Wiklund 1998). This is also consistent with the argument of Tybout (2000) that many manufacturers in Africa performed badly due to, among other things, the unwillingness of the owner/managers to grow their businesses, hence important scale economies are left unexploited. It was observed during the qualitative interviews that the high competition faced by the small firms as a result of high imports from Asia had a negative impact on the growth orientation of the owner/managers. One respondent commented as follows:

"I have gone back to the importation of some products that I started manufacturing three years ago. I make a lot more money importing than producing locally. Remember I am in business first to make money then other things follow."

The other finding was that the percentage of firms that actually achieved high growth was lower than the proportion of firms that aimed for a higher growth. These findings suggest that growth intention alone is not a sufficient condition for growth, but for growth to occur some other characteristics of the owner/manager that correlate positively with growth need to be present (Smallbone et al, 1995). Growth intention of the owner/manager can also be affected by the characteristics of the firm including the overall growth rate of the sector in which the firm was located and the impact of the external environment.

Further to the above discussion we provide below the differences in the characteristics of growth oriented owner/managers and non-growth oriented owner/managers. Our discussions are based on descriptive and multivariate statistical analyses.

ANOVA was performed aimed at ascertaining whether or not there were significant differences in:

(a) The characteristics of the growth oriented and non-growth oriented owner/managers.
(b) The firm characteristics of the growth oriented firms and non-growth oriented firms.
(c) The business strategies adopted by growth oriented owner/managers and non-growth oriented owner/managers.
(d) The impacts of constraint factors on the growth oriented firms and non-growth oriented firms.

The sampled firms were grouped into two being (a) firms that had no growth orientation (33 firms) and (b) firms with growth rate of 1 % and above (89 firms). The summary results of the ANOVA tests are reported in Table 7.3 below.

Table 7.3: ANOVA on Growth Aspiration

Tests	Owner/Manager Characteristics		Firm Characteristics		Business Strategy		Constraints	
	F-Ratio	Sig.	F-Ratio	Sig.	F-Ratio	Sig.	F-Ratio	Sig.
Pillai's Trace	6.630	0.000	1.838	0.087	2.109	0.034	1.118	0.342

P=0.05

The ANOVA results as shown in Table 7.3 above indicate that at 5 percent level of significance:

(a) The characteristics of the owner/managers who were growth oriented significantly differed from the non-growth oriented.
(b) The firm characteristics variables were not significant determinants of owner/managers' growth orientation.
(c) There were significant differences in the business strategies adopted by the growth oriented and the non-growth oriented owner/managers. Growth oriented owner/managers had a higher export, process innovation and planning orientations.

(d) The impact of constraint factors were significantly perceived equally by the growth and the non-growth oriented owner/managers.

Further analysis of the ANOVA test relating to the owner/manager characteristics are shown in Table 7.4 below:

Table 7.4: Analysis of Growth Aspiration and Owner/Manager Characteristics

Variable	F-Ratio	Sig.	Growth Oriented	Non-Growth Oriented	Overall Relationship with Growth
Prior Industry Experience	11.228	.001	High	Low	Positive
Years Experience	4.474	.036	High	Low	Positive
Other Business	30.510	.000	Low	High	Negative
Family Entrepreneurship	7.996	.006	High	Low	Positive
Owner's Age	5.055	.026	Low	High	Negative
Education	13.044	.000	High	Low	Positive

P=0.05

In their study of growth aspiration and moderating role of resources and opportunities, Wiklund and Shepherd (2003) report that small business managers' aspiration to expand their business activities is positively related to actual growth. However, to achieve actual growth depends on the educational level and the experience of the owner/manager. They argue that the small firm owner/managers must have the ability to manage growth and identify new opportunities and conclude that growth increases with aspiration, but at a faster rate for those with higher levels of education.

Within our sampled data, the high growth oriented owner/managers tended to be younger with an average age of 41 years compared with the average age of 45 years for those with no growth intention. Moreover, the high growth oriented owner/managers tended to have a higher level of education than their other counterparts. For example of the 76 firms that anticipated achieving growth rates of no more than 10 percent, only 35 (46 percent) of their owner/managers had university education, compared to 9 (53 percent) owner/managers of the 17 firms that aimed to achieve growth rates exceeding 20 percent.

We observed that the most ambitious owner/manager was more likely to be an immigrant than a Ghanaian. Of the 76 owner/managers who expected less than 10 percent growth, 19 (25 percent) were immigrants whiles 6 (32 percent) of the 19 owner/managers who intended to achieve growth rates exceeding 20 percent happened to be immigrants. The immigrant owner/managers tended to have a higher managerial experience as well as prior industry related experience. Further analysis of how nationality impacts on growth is provided the section 7.4 below.

We observed that the high growth oriented owner/managers had a higher level of human capital in terms of managerial experience, prior industry experience and years of experience (see chapter 3). For example 5 (63 percent) of the 8 owner/managers who desired to grow their employment base at a rate exceeding 50 percent reported that they have some form of managerial experience as against 12 (36 percent) of the 33 firms that sought no growth in employment.

Finally, the high growth oriented owner/managers were more likely to focus on a single business rather than spreading their resources thinly over several businesses. However there was no evidence to suggest that owner/mangers with high percentage of ownership were more likely to have higher growth intention. Our finding is not in support of Walsh and Anderson (1994) who report that the greater the percentage ownership of the owner/manager in a firm the higher the employment growth.

Not more than 2 out of the 8 respondents within the group of firms that anticipated achieving growth rates of above 50 percent had other businesses. This was in sharp contrast with the 25 firms (76 percent) of the 33 firms that had no growth intention for the period. We noted that our analysis might have focused only on the firms that the portfolio owner/managers were not committed to seek growth. This notwithstanding one plausible explanation could be that such owner/managers were more interested in setting up businesses but had less interest in achieving growth. We observed during the exploratory

research that one owner/manager with several business interests believed that he had over stretched himself. He noted in satisfaction the many firms that he had established but was less inclined to seek for further growth. To such owner/managers growth was more likely to mean the number of firms established but not the size of a single firm.

In their study of the attributes of ambitious entrepreneurs Gundry and Welsch (2001), conclude that the ambitious owner/managers tend to have equity in more firms than the low growth seekers and also exhibit higher shareholding intensity. Wiklund and Shepherd (2003) argue that several avenues are open to growth oriented owner/managers which includes the acquisition of other businesses. This makes it entirely important to examine all the business interests of the owner/manager before a firm conclusion can be drawn.

Summary of findings concerning the impact of growth aspiration on growth is reported in Table 7.5 below.

Table 7.5: Summary of Findings-Growth Aspiration

	Our Findings	Existing Findings LDCs	Existing Findings DCs	Comments
(1) Growth Aspiration's relationship with Growth.	Positive	Positive	Positive	Growth oriented owner/managers often had a higher human capital resources, adopt high growth oriented strategies.
(2) Proportion of growth oriented owner/managers.	Low	Low	High	LDCs owner/managers avoid regulation and are less likely to seek growth.
(5) Immigrants and growth aspiration.	High	High	Mixed	Immigrants have high resources, technical knowledge, networks and human capital in LDCs.
(6) Relationship between growth aspiration and portfolio ownership.	Negative		Mixed	High growth oriented owner/managers tended to be more focused on single business development. This is supported by limited resources faced by firms in Ghana.
(7) Relationship between growth aspiration and business strategy.	Positive		Positive	Growth oriented firms had a higher export, process and planning orientations in Ghana.
(8) Relationship between growth aspiration and the external environment.	Neutral			Growth oriented and non-growth oriented firms view the external environment the same way. This implies that growth orientation is a self imposition or motivational factor within the Ghanaian business environment.

7.3: Human Capital (Experience)

Data was collected to allow for the analysis of the impact of four different experience variables on growth. These were prior industry experience, prior managerial experience, local experience and years of experience of the owner/manager. As noted earlier prior industry experience was a highly influential factor impacting on growth. This supports the argument that owner/managers who have previously worked in the same sector, in which they established their own business, will have developed their expertise and experience about the acceptable norms and practices within the sector (Storey 1994, Autere 2005). Prior industry experience may positively impact on the choice of equipment that in many small manufacturing firms plays a key role in achieving success. This point was highlighted by one of the qualitative interview respondents as follows:

"Often people with unrelated background like economies enter into the industry and they do not know the machines to choose and they end up getting it all wrong."

Previous studies into the relationship between growth and prior sector experience have reported mixed results. While for some researches no impact was identified (Storey et al 1989, Kalleberg and Leicht 1991, Solem and Steiner 1989, Reynolds and Miller, 1988, Westhead and Birley 1993, Wiklund 1998, Dahl and Reichstein 2004, Mengistae 2004), others report that prior industry experience leads to slower growth (Storey 1994, Reynolds 1993, Jones 1991, Dunkelberg et al 1987, Autere 2005). In Kenya Neshamba (undated) carried qualitative interviews among 25 small firm owners and reported that about 88 percent attributed their growth success to previous work experience, with the remaining 12 percent who started their business without any prior work experience being more cautious of growth phases.

Prior general managerial experience was not an influential factor that led to growth within the data set. This can possibly be due to the fact that managerial experience might have been acquired within state related institutions. The previous experiences of those

owner/managers employed in the state-owned enterprises may have acquired experiences that were less relevant in managing firms under competitive market conditions (Smallbone and Welter, 2001). According to Storey (1994) a higher managerial experience will lead to a higher growth because such managers will have a higher 'reservation wage' that can adequately be met by a corresponding higher growth and large firm size. The reverse of this argument may rather be true in LDCs. This is because in many of these countries employment conditions are so poor that many employees are rather disenchanted, lack motivation and confidence. These characteristics can easily be carried along into one's own managed business, therefore limiting growth.

In Lithuania, a transitional economy Aidis (2003), reports that a small firm owner with a previous work-related experience is significantly more likely to demonstrate a higher business growth than those without it.

Dahl and Reichstein (2004) in their study of prior experience and the survival of new organizations concluded that the type of experience that entrepreneurs acquire and carry from other firms in the industry is very important to the likelihood of survival of their own firms. However, experience acquired from firms with low motivation can be a disadvantage.

Wiklund and Shepherd (2003) find no evidence that general work experience affects the growth of small firms. They argued that differences in business context and changes in business environment do not allow for the general application at all times even the most successful business logic and management practices. See Table 7.6 below for a summary of findings relating to the owner/manager's experience on growth.

Table 7.6: Summary of Findings- Experience

	Our Findings	Existing Findings LDCs	Existing Findings DCs	Comments
(1) Relationship between prior industry experience and growth.	Positive	Mixed	Mixed	High difficulty in accessing information and lack of technical knowledge makes it important for high industry experience to achieve growth in Ghana.
(2) Relationship between general managerial experience and growth.	Neutral	Mixed	Mixed	General managerial experience is often acquired in a non-competitive oriented environment in Ghana.
(3) Relationship between local experience and growth.	Negative			With low access to information, ambiguity in rules and regulations and high cultural differences in LDCs, local experience is an important growth factor. However, may only complement foreign experience to achieve higher growth.

7.4: Nationality

Following the qualitative interviews our main focus was to empirically confirm or otherwise the findings that small firm growth is influenced by the fact that the owner/manager is or is not a Ghanaian. In particular the exploratory research result was that firms owned and managed by immigrants grew faster. We provide in Table 7.7 below, the sectoral analysis of nationality.

Table 7.7: Analysis of Nationality by Sector

Sector	Immigrants		Ghanaians		Total	
	No. Firms	%	No. Firms	%	No. Firms	%
Wood Processing	8	36	14	64	**22**	**100**
Metal Works	4	16	21	84	**25**	**100**
Food Processing	6	21	22	79	**28**	**100**
Paper & Printing	1	4	25	96	**26**	**100**
Plastics	14	67	7	33	**21**	**100**
Total	**33**		**89**		**122**	

Unlike some African countries such as Cote d'Ivoire, in Ghana the European colonial masters virtually left the country immediately after independence. Their place was taken over mainly by the Lebanese and the Asians mostly from India. These immigrants have since dominated the business community in Ghana. Firms owned and managed by immigrants were found to grow faster when all the other variables within the regression equations were held constant. However, when the effects of business strategy and firm characteristics variables were omitted, firms that were owned and managed by Ghanaians grew faster. This implied that being an immigrant was not sufficient to achieve growth but became advantageous when combined with superior business strategy and resources needed to achieve growth. This was echoed by Ramachandran and Shah (1999) when they argued that in the case of non-African firms entrepreneurial characteristics are not important determinants of growth, as these firms enjoy advantages arising from being minority such as access to informal networks and credit.

Table 7.8: Test of Nationality on Growth Variables

Tests	Owner/Manager Characteristics		Firm Characteristics		Business Strategy	
	F-Ratio	Sig.	F-Ratio	Sig.	F-Ratio	Sig.
Pillai's Trace	2.32	0.037	6.29	0.000	6.75	0.000

Multivariate analysis of variance (MANOVA) performed indicated that there were significant effect of nationality on owner manager characteristics, firm characteristics and business strategy at 5 percent level of significance as reported in Table 7.8 above.

Further analysis shows that immigrant firms were more likely to adopt high growth oriented strategies than their local counterparts. This was a reflection of the fact that immigrant owner/managers tended to have a higher level of resources and managerial experience, which became evident during the qualitative interviews.

The immigrant firms were also found to be more export oriented. Twenty nine (88 percent) of the firms owned/managed by immigrants were found to be engaged in export, while 30 (33 percent) of the locally owned and managed firms were engaged in export. Again 22 (77 percent) of immigrant owner/managers attached a higher rate of importance to marketing activities, compared to 22 (70 percent) of the local owner/managers.

Within the context of our exploratory research there appeared to be a general consensus that the immigrant owner/managers perform better than the Ghanaians, because the former work harder. We present below two similar perspectives from some respondents. The first quotation relates to an immigrant owner/manager, followed by that of a Ghanaian owner/manager.

First Quote: *The foreigners especially the Lebanese are very resourceful. They are always ready to take risk. There is a bit of difference in decision making process where Ghanaians are slow in taking decisions. One of the problems is that the education here in Ghana does not make people have the experience needed to manage business.*

Second Quote: *The foreigners are doing better than most of my competitors (Ghanaians) because the Indians for example work very hard. They cut cost; they are constantly on their machines. They are not like we Ghanaians that relax.*

Harding et al (2004) argue that firms with foreign ownership find it easier to break into exports markets and may therefore grow faster. However, they found no evidence to the extent that foreign ownership plays any significant role in firm growth in Africa using data from three African countries (i.e. Ghana, Kenya and Tanzania).

Furthermore, the immigrants were more likely to adopt formal planning and structured method of running their firms as indicated by the higher number of 26 (79 percent) firms that had business plans as against 45 (51 percent) of the local owner/managers.

The immigrant owner/managers were also found to be highly focused on the development of a single business when compared to the local owner/managers who appeared to be much

more diversified by having other business interests. Finally, the locally owned and managed firms were more likely to suffer from lack of adequate resources needed for expansion and growth. This is indicated by the fact a higher percentage 76 (85 percent) of local owner/managers perceive that lack of credit was an important to extremely important constraint to growth as against 22 (66 percent) of the immigrant owner/managers. Fafchamps (2000) found no evidence of ethnic bias in accessing bank credit in Kenya and Zimbabwe, however reported that blacks do suffer from obtaining suppliers credit, which is considered to be an important source of finance for small firms (Bade and Chifamba, 1994). We also observed that the local owner/managers were more likely to spread their resources thinly. For example 41(46 percent) out of the 89 local owner/managers had other business interests, as against 8 (24 percent) out of the 33 immigrant owner/managers.

The more formalized business activities of the immigrants are supported by Rath (2001). It was argued that though immigrants normally arrive in the host country and find themselves in an unfamiliar environment, they acquire capital and labor for their businesses by mobilizing ethno-cultural resources. The longer these immigrants stay in the host country, the more familiarized they become with prevailing rules, regulation and practices, the more formalized their business activities become.

The reverse of Rath (2001) argument can be considered as more applicable in the Ghanaian context. This is because the average Ghanaian small business owner/manager is less likely to adopt a formalized structured way of carrying business transactions. It is therefore possible that the immigrants who arrive with more formalized ways of doing business soon adopt the Ghanaian ethno-cultural and social context and become less formalized in their business dealings.

Other researchers suggest that most immigrants from racial and ethnic groups tend to develop concentration in certain industries that bear reflection of their distinctive cultural skills, special skills, and opportunities often arising from networks, contacts and

experiences (Rath 2001, Ram and Barrett 2000, Waldinger 1996). These advantages again allow them to grow their businesses faster.

The immigrants were found to be more concentrated in the plastics and rubber sub-sector sector and to some extent the wood processing sub-sector than the other sectors. We found that in the plastics/rubber sub-sector all the 14 immigrant firms were owned/managed by Indians and Lebanese. It is believed that these owner/managers had an advantage by corroborating among themselves and also obtained cheaper equipment and raw materials from India. The immigrants were noted for example to possess plenty of capital, contacts and skills that allowed them to secure large timber concessions from the government. It was therefore not surprising that all the 8 (36 percent) of the immigrant firms in the wood processing sub-sector had owner/managers with Lebanese origin.

Berg et al (1994) argument that many immigrants tend to entrepreneurship mainly due to their exclusion from the formal employment opportunities appears to be applicable in Ghana. The unattractive nature of formal employment condition of service may equally force many immigrants to entrepreneurship and consequently serves as a key motivational factor to survive by growing their businesses.

Biggs and Raturi (1997) argue that the ethnic minority in Kenya especially the Asians are more likely to have easier access to suppliers credit due to better flows of information, trust and contractual enforcement mechanisms among the members of these groups, leading to a higher firm performance than the locally owned and managed firms (see section 4.7 cultural issues).

Further analysis revealed that Ghanaian owned firms start on a smaller scale based on number of employees than immigrant owned firms. For example out of the 33 immigrant owned and managed firms only 5 (15 percent) firms were within our classification of small firm, 19 (58 percent) were medium and the remaining 12 (27 percent) were large firms. On the other hand as many as 50 (56 percent) of the 89 locally owned and managed firms

surveyed were small, 27 (30 percent) were medium and only 12 (14 percent) were large firms. This finding has been confirmed previously by Ramachandran and Shah (1999). They found that in Kenya, Asian and European firms start out with a significantly larger number of employees than African firms.

More recently Eifert et al (2005) note that foreign minority firms in Africa tend to be more productive and export oriented than the indigenous firms.

Table 7.9 presents summary of findings relating to nationality on growth.

Table 7.9: Summary of Findings- Nationality

	Our Findings	**Existing Findings LDCs**	**Existing Findings DCs**	**Comments**
(1) Immigrants firms grow faster.	Confirmed	Confirmed	Mixed	Access to resources and knowledge are predominately in favor of immigrants in LDCs.
(2) Immigrants use higher growth oriented strategies.	Confirmed			Immigrants are more growth oriented. Often involved in export, business planning and innovation. Have higher industry experience. Highly focused on single business and do not spread resources thinly.
(3) Immigrants have higher resources.	Confirmed	Confirmed		Immigrants have higher technical know how. Are able to access credit easily within and outside the country. Had strong entrepreneurial family background that allows transfer of resources from generation to generation.
(4) Immigrant businesses are concentrated in high growth industries.	Confirmed			Immigrants are selective in activities. Often engaged in export oriented activities such as wood processing. Often dominating industries entered through networking and higher access to resources.

7.5: Conclusion

In this chapter we have provided explanations to the findings of this research relating to how the characteristics of the owner/manager affected the growth of these small firms. The results of the initial exploratory research provided a further understanding to our empirical findings. We conclude that the growth rates of the firms were highly influenced by the owner/managers aspiration to seek growth. It was also found that growth was positively influenced by a higher human capital such as prior industry experience.

These and others findings provide the basis for our managerial and policy recommendations as set out in chapter eleven.

Chapter Eight

The Characteristics of the Firm

8.1: Introduction

In this chapter we highlight the impact on growth arising from the characteristics relating to the firms themselves. Four of the firm characteristics variables were included in the model. The sector within which a firm operates, as argued by Storey (1994) reflects the decision made by the owner at the start of the business. This and other factors such as firm size and age differ from the entrepreneur's characteristics and resources which are identifiable before the start of the business. Following the works of Storey (1994), Barkham et al (1996) and Smallbone and Wyer (2000), sector had been included in the firm characteristics variables.

Table 8.1: Hypotheses Relating to the Firm Characteristics

Hypotheses	Impact on Growth	Test Results
H. (2A) Growth is influenced by the sector within which a firm operates (in particular firms operating within the metal sub-sector will show the highest growth rate).		*Confirmed*
H. (2B) Growth is directly and significantly influenced by the size of a firm.	*Positive*	*Negative and significant*
H. (2C) Growth is positively and significantly influenced by the age of a firm.	*Positive*	*Negative not significant*
H. (2D) Growth is negatively influenced by the fact that a firm has several owners (i.e. firms with multiple ownership are less likely to achieve a high growth).	*Negative*	*Negative and significant*

Our empirical evidence was that firm size and the plastics and rubber sub-sector were the only firm characteristic variables that had significant influences on growth. The remaining sector variables and firm age as well as the number of owners' variables, had relatively less explanatory power in the growth model. These factors were however, included in the

model due to their theoretical reasons. We provide below explanations to our findings relating to these variables based on existing theories, empirical findings and the results of our initial exploratory research.

Table 8.1 above presents the hypotheses relating to the firm characteristics that were tested.

8.2: Sector

Firms in different sectors are said to face different product demands, have different cost structures and varied availability of resources especially in LDCs (McPherson 1996, Tybout 2000). These therefore provide the bases for differences in sectors on growth. Data was collected for five manufacturing sub-sectors to allow for the study of growth differentials among sectors by controlling for the effects of other variables. The sector-specific impacts on growth were included in the regression equations with the metal sub-sector as the base variable. The use of the metal sub-sector as a base was informed by our initial finding that it was the fastest growing sub-sector among the five sub-sectors.

We tested the validity of our results by using the plastics and rubber sub-sector as the base variable. The results obtained were not in anyway different from the ones obtained originally. The effects of sectoral differences on growth for the other four sub-sectors were insignificant when the effects of owner/manager characteristics and the firm characteristics variables were omitted (see Table 6.6). Their coefficients were negative. This confirmed our initial finding and hypothesis that the metal sub-sector was the most rapid growing sub-sector.

By controlling for the effects of the owner/manager characteristics, firm characteristics and business strategy variables, the coefficient for plastics and rubber sub-sector remained negative, became bigger and significant at 5 percent level of significance (see Table 6.2). This was an indication that the plastics and rubber sub-sector was the least growing sub-

sector, followed by food processing, paper and printing, and furniture and wood processing in that order (based on the size and the direction of their respective coefficients). Our data also showed that in terms of growth in sales, the furniture and wood processing was the least growing sub-sector, followed by the plastics and rubber sub-sector. The furniture and wood processing sub-sector faced the highest level of competition, arising from both imports and informal businesses. Additionally, the growth rate of the sub-sector was constrained by a high level of regulation on timber extraction. These had led to a decline in the output of the industry, with the smaller firms being the worst affected.

The plastics and rubber sub-sector was the worst affected by the perceived barriers to growth. To some extent the low growth in both sales and employment of the sub-sector was surprising. This is because the sub-sector had the most export growth potentials during the studied period and firms within it were found to be positively responding to the export potential. It can be concluded that the plastics and rubber manufacturers were studying the situation in the Cote d'Ivoire and had not taken a firm decision to boost production. These firms, therefore, substituted their sales in the local market with export, possibly for better returns.

Rankin et al (2002) using data from Ghana report that between the period 1991-1995, it was only the wood and furniture sub-sector that experienced a fall in output, however real output declined for all manufacturing sub-sectors for the period 1995-1999. They further note that the metal sub-sector experienced less decline in terms of real output and employment than the other sectors. This was mainly due to the fact the metal sub-sector was largely non-traded and thus protected from trade liberalisation.

Goedhuys and Sleuwaegen (1999) report that in Burundi firms engaged in metal works are likely to grow at a slower rate than the agro-based industries. In Ghana firms engage in aluminium processing which forms a greater percentage of the metal sub-sector have a competitive advantage in the supply of raw material as against their competitors in the

West African Sub-region. Teal (1998) finds no evidence for differential rates of employment growth across sectors in the Ghanaian manufacturing sector during the period 1991-1995. Sleuwaegen and Goedhuys (2002) find that firms engaged in metal works as well as wood processing have greater employment growth rates than those involved in food processing.

According to McPherson (1996), in five African countries (i.e. South Africa, Swaziland, Lesotho, Botswana and Zimbabwe) the sector in which a firm operates influence growth when the influence of other factors have been controlled for. However, no clear pattern emerged across these countries. For example in South Africa among four sub-sectors, growth was highest in wood processing, followed by paper, printing and publishing, then food processing and metal fabrication in that order. While in Lesotho the highest growing sub-sector was metal fabrication, with wood processing and food processing in second and third positions respectively. In Botswana, the wood processing firms grow faster than the metal fabricators.

Table 8.2: MANOVA on Sub- Sectors

Multivariate Tests	**Owner/manager Characteristics**		**Firm Characteristics**		**Business Strategy**		**Constraints**	
	F-ratio	Sig.	F-ratio	Sig.	F-ratio	Sig.	F-ratio	Sig.
Pillai's Trace	2.1	.001	2.1	.018	3.2	.000	2.5	.000
Wilks' Lambda	2.1	.001	2.1	.019	3.5	.000	2.6	.000
Hotelling's Trace	2.2	.001	2.0	.020	3.7	.000	2.8	.000
Roy's Largest Root	5.2	.000	3.4	.012	11.0	.000	6.3	.000

MANOVA was conducted aimed at ascertaining whether or not there were growth factors that had similar impact on growth of firms in the different sub-sectors. The results of the tests are reported in Table 8.2 above. It was observed that:

(a) there were significant differences in the owner/manager characteristics variables among the sub-sectors,

(b) there were significant differences in the firms' growth characteristics variables among the sub-sectors,

(c) the growth strategies adopted by firms within certain sub-sectors were significantly different from those of other sub-sectors and,

(d) the sub-sectors faced significantly different forms of constraints (see chapter 10).

The specific growth variables which were found to differ among the sub-sectors are reported in Appendix 8.1.

Table 8.3: The Impact of Constraint Variables on Sub-Sectors

Variable	F-Ratio	Sig.	Furniture & Wood	Metal	Food Processing	Paper & Printing	Plastics & Rubber
Late Payment	8.157	.000	Low	High	Medium	High	High
Lack of Transparency	9.750	.000	High	Medium	Low	High	Low
Informal Competition	6.283	.000	Medium	High	Low	High	Low
Lack of Demand	3.371	.012	Low	Medium	Low	High	High
Inefficient Tax	4.107	.004	Low	Low	Low	High	High
Inefficient Legal System	5.068	.001	Low	Low	High	Medium	High
Property Right	2.708	.034	Medium	Low	High	Low	Medium
High Inflation	2.742	.032	Low	High	Medium	High	High
High Devaluation	3.821	.006	Low	High	Low	Medium	High
Unskilled Labour	3.230	.015	Medium	Low	Low	Medium	High
Inefficient Technology	2.525	.045	High	Low	High	High	Low
Trust & Honesty	2.919	.024	Medium	Low	High	Low	High

P=0.05

It observed that the impact of some other owner/manager characteristics variables such as growth orientation, prior industry experience, local experience, ownership of other business and family entrepreneurship background were not significant determinants of the differences in the growth rates experienced by the different sub-sectors.

Firm size and the number of owners had no significant impact on growth rate differentials among the sub-sectors. Finally, business planning and informal training had no significant varied impact on growth among the sub-sectors. Our summary findings of differences in sector on growth are reported in Appendix 8.2.

8.3: Firm Size

According to the law of proportion effects (LPE) or 'Gibrat's Law' a firm's growth is independent of its size, but follows a random drawing from a distribution of growth rates. As much as the law has been confirmed by some studies (Hart and Paris 1956, Hymer and Pashigian 1962, Simon and Bonini 1958, Singh and Whittington 1975, Mansfield 1962), others have argued that small firms grow faster than their larger counterparts both in developed, developing and transition economies. For example researchers such as Evans (1987a), Evans (1987b), Hall (1987), Dunne and Hughes (1990), Storey (1994), Hart and Oulton (1996), Almus and Nerlinger (2000), Farinas and Moreno (2000) using data from developed countries, MacPherson (1996), Das (1995), Chuta (1989), Liedholm (2002), Goedhuys and Sleuwaegen (1999), Sleuwaegen and Goedhuys (2002) from developing countries and Aidis and Mickiewicz (2004), Faggio and Konings (2003) from transition economies, have all concluded that there exists a negative relationship between firm size and growth.

McPherson (1996) using data from five African countries (i.e. South Africa, Swaziland, Lesotho, Botswana and Zimbabwe) finds no evidence that the Gibrat's law holds for firms in these countries. In fact for smaller firms, an inverse relationship between size and growth generally holds. Similarly, Sleuwaegen and Goedhuys (2002) report that in Cote d'Ivoire the relationship between initial size and employment growth is significantly negative, implying that the smaller firms grow faster than the larger ones. In Burundi, Goedhuys and Sleuwaegen (1999) note that, institutional factors inhibit firms from having

equal access to resources hence affecting the effective growth rate and resulting in resource misallocation and reduction in productivity levels.

The inverse relationship between growth and size has been confirmed by learning models of Jovanovic (1982) and Pakes and Ericson (1990). The models see smaller and younger firms as having faster and more volatile growth rates than larger and older firms. This is because firms enter markets at less than minimum efficient scale and so are able to increase their efficiency level in a learning process through human capital formation (Sleuwaegen and Goedhuys, 2002).

Small firms may achieve a higher growth rate for reasons such as (a) being more flexible (b) less bureaucratic and (c) changes in the balance of competitive advantage arising from the emergence of information technology (Barkham 1996, Bartlett and Franicevic 1999).

However, in many LDCs it is argued that small firm growth is highly constrained by institutional barriers such as lack of support, resource constraints, regulations and policy bias and high transaction costs (Sleuwaegen and Goedhuys 2002, Tybout 2000). Again it is obvious that smaller firms are less likely to take advantage of the trade liberalization policies being pursued by most LDCs to increase their exports. The poorly developed physical and market infrastructures put the smaller firms at a greater competitive disadvantage than the larger firms (Vachani, 1994). According to Cook and Nixson (2000) the administrative discretion in the allocation of public procurement contracts in many developing countries disadvantages smaller firms. In many LDCs, competition fails to operate to give full meaning to the learning models due to high sunk entry cost and small number of market participants (Sleuwaegen and Goedhuys 2002, Goedhuys and Sleuwaegen 1999).

In view of these limitations our initial position was that larger firms were more likely to grow faster than smaller firms. The data however, did not support this hypothesis. The coefficient of size (-0.422) on growth was negative and significant at 1 percent level of

significance. The above coefficient was larger than the coefficients of firm age (-0.074) and sector (plastics and rubber -0.169, furniture and wood processing -0.022, food processing -0.104 and paper and printing -0.036).

It is important to note that only surviving firms were included in the data set, this as argued by McPherson (1996) can lead to selection bias, particularly in favour of the smaller and younger firms which are more likely to fail. The exclusion of non-survivors was in line with our objective to examine the factors that led to the growth of these small firms. More so information on firms that have ceased to operate is difficult to obtain (McPherson, 1996). More recently Biesebroeck (2005) finds that in Africa large and medium sized firms are expanding their employment base faster than smaller ones, with no corresponding growth in productivity.

The data obtained however, provided little evidence to support the finding that smaller firms grew faster than their larger counterparts, having regard to the relationships between the other variables that had positive impact on growth and firm size. For example owner/managers with a higher level of education, entrepreneurial family background, prior industry experience and several business interests were more likely to grow their businesses faster.

We found a more direct link between owner/managers of larger firms possessing the above characteristics than owner/managers of smaller firms using a descriptive statistical analysis. With regard to education 25 (45 percent) out of 55 owner/managers of the small sized firms indicated that they have university education compared to 28 (61 percent) out of 48 medium sized firms and 12 (57 percent) of the large sized firms. Again 22 (40 percent) of the small size firm owner/managers reported that they have other businesses, as against 19 (41 percent) and 8 (38 percent) for medium and large size firms respectively. These findings are in support of the assertion that growth in small firms is determined by a

complex relationship of factors (Barkham et al 1996) and as shown by our model (see chapter 6).

Generally, the smaller firms were less likely to engage in strategies that were growth oriented, such as export, marketing, staff development and formal planning.

However, the above findings did not hold true for all the sectors. For example, 3 out of the 5 smaller plastics and rubber manufactures were into export, largely in response to the political instability in Cote d'Ivoire (see chapter 3). In the case of the furniture and wood processing sub-sector, all the 8 firms classified as small had no marketing expenditure. We found during the qualitative interviews that most of the small furniture and wood manufacturers faced with high import competition had resorted to niche marketing strategy. These firms won their customers mainly through direct contacts and referrals. According to these owner/managers, a high marketing expenditure was less likely to result in an increase in sales. Hence the smaller firms had adopted cost efficiency and non-standardized products as additional business strategies.

To obtain further understanding of how firm size influenced growth MANOVA was used to ascertain the growth variables that had significant links with firm size. Our results as shown in Table 8.4 indicate the following:

(a) that the owner/manager's characteristics were significantly different among the various firm size categories,

(b) that the characteristics of the firms significantly differed among the firm size categories and,

(c) that the business strategies adopted were significantly linked with firm size.

Table 8.4: MANOVA on Firm Size

Multivariate Tests	Owner/manager Characteristics		Firm Characteristics		Business Strategy	
	F-ratio	Sig.	F-ratio	Sig.	F-ratio	Sig.
Pillai's Trace	2.7	.001	4.7	.000	3.0	.001
Wilks' Lambda	2.8	.001	5.0	.000	3.2	.000
Hotelling's Trace	2.9	.000	5.3	.000	3.3	.000
Roy's Largest Root	5.1	.000	9.4	.000	6.1	.000

P=0.05

At 5 percent level of significant the growth variables that were found to be significantly different among the firm size categories and as presented in Appendix 8.3 were owner/manager characteristics (growth aspiration and nationality), firm characteristics (firm age) and business strategy (marketing, export and product innovation).

The MANOVA results further showed that certain owner/manager characteristics such as prior industry experience, local experience, level of education, family entrepreneurship background and other business ownership were not significant growth factors that separated the firm size groups (see Appendix 8.4 for summary findings).

8.4: The Age of the Firm

There is a general agreement in the advanced world that younger firms grow faster than older firms, in other words firm age is inversely related to growth (Storey 1994, Evans 1987a, Cabral and Mata 2003, Davis et al 1996, Jovanovic1982, Wagner 1995, Glancey 1998, Davidsson et al 2002, Andersson 2003). This hypothesis is based on the argument that aging is often associated with technological obsolescence as well as increasing structural inertia. It is further argued that risk is directly associated with growth rates and failure rates, therefore as a group of firms ages, more of the risk-averse firms survive. This has the effect of lowering the growth rate of firms as they grow older (Van Wissen, 2002). According to Goedhuys and Sleuwaegen (1999) the aging of a firm allows its managers to

guess their efficiency accurately. Output differences therefore decrease year by year, thus growth rate among older firms becomes more stable.

Harding et al (2004) note that in developing countries; firms' age may be related to its growth for reasons such as market constraints that firms face. It is therefore possible that large firms which are more likely to face demand constraints will grow slower than small firms.

According to Harding et al (2004) in Africa younger firms grow faster, for the reason that as firms become more mature they are constrained by limited demand and face limited access to the export markets. McPherson (1996) reports that in South Africa, Swaziland, Lesotho, Botswana and Zimbabwe, the relationship between a firm's age and growth follows the inverse pattern in accordance with Jovanovi's learning theory, and that size and age have the most predictive power for the determination of employment growth. Mengistae (1995) also finds Ethiopian small manufacturing firms exhibit higher growth rates than their smaller counterparts.

On the other hand, aging leads to learning by firms (Van Wissen, 2002). Small enterprises need time to develop their full performance potential by developing the necessary experience to increase performance and adjust to an optimal size. An older firm is more likely to have a management that has developed successful styles that have been perfected over time (Kimuyu, 2001).

Other researchers however, find no empirical evidence in support of age of a firm having a significant impact on growth (Smallbone et al 1993, Kelleberg and Leicht 1991). For example Smallbone et al (1993) using data from the UK conclude that age is not a characteristic which distinguishes high growth firms from other firms. They therefore argue that every mature small firm has more potential for growth, and that growth is often a discontinuous process in SMEs. They further note that factors such as a change in leadership, a change in management, and/or a sharp external shock can result in a

reassessment of the nature and pace of a firm's development that can change the growth fortune of the firm.

Having regard to the above theoretical underpinnings, the age of the firm was considered as an important variable, which was therefore included in the analysis. It also became evident from our qualitative interviews that the most constraining factors to small firm growth in Ghana were lack of credit and its associated high cost of borrowing. According to Diamond (1989) and more recently Sakai (2005), borrowing cost of a firm declines over time as the firm keeps a good track record. Older firms with higher reputation are therefore able to borrow at a substantially reduced rate than younger firms. Sleuwaegen and Goedhuys (2002) also note that in the African context where transaction and information costs are very high and with less developed markets and little transparency into a firm's activities, performance, strengths and reputation effects are considered to be important assets. This was consistent with what one owner/manager interviewed during the exploratory stage observed.

"Our track records speak a lot in Ghana because we are a 28 year old company. This works very heavily in our favour in many respects including raising funds from the banks."

The empirical evidence however did not support our prior position that firm age will be directly associated with growth. Growth was found to be negatively associated with the age of the firm, which is consistent with the theory that new firms need to grow faster in the early years to achieve minimum efficient scale (Storey 1994). The oldest firm had been in existence for 45 years, while the youngest were 4 years at the end of the study period. The mean firm age was 11 years. The food processing sub-sector appeared to have the highest proportion of younger firms. Out of the representation of 28 firms in the food processing sub-sector 8 (29 percent) were below five years as against 2 (9 percent) out of 21 firms in the plastics and rubber sub-sector.

Table 8.5: Analysis of Firm Growth by Age Distribution.

Age Yrs	High Growth No. Firms	%	Growth No. Firms	%	Stable No. Firms	%	Decliners No. Firms	%
0-5	15	50	10	26	7	39	5	14
6-10	11	37	14	36	6	33	7	20
11-15	2	7	9	23	2	11	10	29
16-20	1	3	4	10	1	6	8	23
Above 20	1	3	2	5	2	11	5	14
Total	**30**	**100**	**39**	**100**	**18**	**100**	**35**	**100**

In Ghana, Rankin et al (2002) find that, younger firms are more likely to invest in new technology than the older firms. They argue that younger firms are credit constrained, thus cannot borrow in order to invest in capital assets in one go. Instead they accumulate internally generated funds over a period and acquire technology in piecemeal. They conclude that younger firms therefore have newer machinery and equipment and are more efficient.

MANOVA was performed aimed at ascertaining whether there were differences in the business strategies adopted by three age categories. The sampled firms were divided into three groups based on their ages as follows: (Young Firms- below 5 years, Middle Aged Firms- between 5 and 10 years, and Old Firms- above 10 years).

Table 8.6: MANOVA on Firm Age

Multivariate Tests	Owner/manager Characteristics		Firm Characteristics		Business Strategy	
	F-ratio	Sig.	F-ratio	Sig.	F-ratio	Sig.
Pillai's Trace	1.097	.356	3.514	.000	1.444	.113
Wilks' Lambda	1.102	.352	3.776	.000	1.484	.097
Hotelling's Trace	1.106	.347	4.037	.000	1.523	.084
Roy's Largest Root	1.756	.085	7.831	.000	2.775	.006

P=0.05

Our findings as reported in Table 8.6 above were that at 5 percent level of significance:

(a) There were no significant relationships between owner/manager growth characteristics variables and the firm age groups.

(b) That there were significant differences in the firm characteristics variables and the firm age groups. Further analysis indicates that the firm size had varied relationships with the firm age groups. The older firms were found to be larger, implying that firms needed to have time to develop in size.

(c) That firm age was not a significant factor that determined the business strategies the firms adopted. It was noted however, that in the case of export there was a significant relationship with firm age. The older firms were found to be more export oriented (see chapter nine).

As shown in Table 8.7 below, 10 (27 percent) of the 37 firms below 6 years were engaged in exports, while 8 (80 percent) of the 10 firms above 20 years old were exporters. Summary findings related to firm age on growth is presented in Appendix 8.4.

Table 8.7: Analysis of Exporting Firms by Age Distribution

Age Yrs	Exporters No. Firms	%	Non-Exporters No. Firms	%	Total No. Firms
1-5	10	27	27	73	37
6-10	20	53	18	47	38
11-15	11	48	12	52	23
16-20	10	71	4	29	14
Above 20	8	80	2	20	10
Total	**59**		**63**		**122**

8.5: Number of Owners

Our initial view was that firms with multiple ownerships were likely to grow more slowly than firms owned/managed by a single person. This position was largely informed by the results of the initial exploratory research. The argument was that due to a high perceived lack of trust among business people in Ghana, joint ownerships were less likely to be successful. The level of suspicion among owners was fuelled by the general lack of a good record keeping within many small firms.

The number of owners was included in the data through a simple variable indicating the presence of other owners or otherwise. This method was in the past used by Barkham et al (1996). Our finding was that the presence of other owner had a negative impact on growth, though statistically not significant at 5 percent level. As shown in Table 8.8 below, there were 82 (67 percent) firms with more than one owner.

The above finding is inconsistent with some findings in the developed countries. For example, Barkham et al (1996), report that in the UK among 171 small firms the presence of an active partner improves sales growth by 19 percent over a five year period. They provide two main arguments in support of their finding. First, firms owned/managed by one person possibly express independence as the only objective. Such owner/managers are mainly concern with making a reasonable living but not the growth of their businesses.

Table 8.8: Analysis of Number of Owners

No. of Owners	No. of Firms	%
1	40	33
2	43	35
3	34	28
4	3	2
5	1	1
7	1	1
Total	**122**	**100**

The second argument is that the presence of team management is associated with diversity of ideas and skills. Other owners could also bring with them additional financial resources which is considered as one of the major factors constraining small firm growth especially in LDCs.

These and other benefits associated with multiple ownerships notwithstanding, it appeared the negative aspects such as high conflict and disputes among members have over shadowed the benefits. A study conducted by Walsh and Anderson (1994) concluded that the greater the percentage of ownership of the owner/manager, the higher the growth rate of employment. Clearly, the suggestion by these researchers for further research into the

role of minority-ownership and non-shareholding managers of small firms is highly applicable in Ghana. This is because the growth of firms requires expansion of a management team; however the impact of expanded team on growth has not been adequately explored in Ghana.

8.6: Conclusion

The most rapid growing sub-sector was the metal works, while firms engaged in plastics and rubber products had the least growth rates confirming the hypothesis that growth is affected by differences in sectors. Significant differences were observed among the sectors in the areas of owner/manager characteristics, firm characteristics, and business strategy as well as constraints factors.

The results also indicated that the size of a firm has a negative and significant influence on growth, notwithstanding the fact that the larger firms were more likely to adopt high growth business strategies. The owner/managers of the larger firms were also found to possess characteristics that were more likely to lead to rapid growth.

We observed that younger firms grow faster than the older counterparts, against theoretical underpinnings that in many LDCs smaller firms face a high level of constraints that undermine their growth rates.

Finally, firm growth was found to be negatively influenced by the fact that a firm has other owners. This is consistent with the theory that the weak institutional structures in many LDCs will fuel conflict and mistrust among the business community; hence multiple ownerships will impede firm growth.

Chapter Nine

Business Strategy

9.1: Introduction

In this chapter we examine and provide explanations to the research results and findings reported in chapter six, regarding business strategies used by the firms to achieve growth. Firms undertake various actions aimed at achieving certain set objectives which may include growth. The process of taking these actions referred to as 'strategic process' by management researchers (Marsden and Forbes 2003) is mainly credited to the owner/manager in the case of small firms. It is argued for example that the owner/manager of a small firm determines 'where' and 'how' to compete (O'Gorman, 2000). Thus the link between the strategies used to achieve growth in small firms cannot be separated from the characteristics of the owner/manager. Small firms most often merely react to the external environment within which they operate, because they do not have the required capacity to effect a change in the external environment (Marsden and Forbes 2003). We therefore examine how some of the characteristics of the owner/manager and the external environment as well as the firm characteristics have impacted on the strategic choices made by the firms in this chapter.

We limit our discussions to those variables found to be either statistically significant or due to their theoretical contributions were included in our model of small firm growth. Our main findings were that undertaking marketing activities, engaging in business planning and exporting were all significant and positive contributors to growth. For product innovation, process innovation and training their contributions though not significant, were also positive. The rest of the chapter provides further explanations of these findings. Table 9.1 presents the hypotheses tested and the results relating to business strategy variables.

Table 9.1: Owner/Manager Characteristics-Hypotheses Tested

Hypotheses	Impact on Growth	Test Results
H (3A) The level of importance placed on marketing activities will positively and significantly influence growth.	Positive	Positive and Significant
H (3B) The level of importance placed on innovative activities will positively and significantly influence growth. In particular firms that show importance to: (a) new product introduction (b) process innovation are more likely to achieve higher growth.	(a) Positive (b) Positive	(a) Positive not significant (b) Positive not significant
H (3C) Growth is positively and significantly influenced by the fact that a firm is engaged in export.	Positive	Positive and Significant
H (3D) Growth is positively and significantly influenced by the fact that a firm is engaged in formal planning.	Positive	Positive and Significant
H (3E) Growth is positively and significantly influenced by the fact that a firm is engaged in training and skills development of employees.	Positive	Positive not significant

9.2: Export

A firm's ability to enter an export market can be seen as willingness to be part of a more competitive market place and also to achieve growth (Storey 1994). Small firms which are internationally more active grow faster and are more efficient than their domestic counterparts (Ibeh 2000, Storey 1994, Tybout 2000). This is highly important where the size of the domestic economy is small and the extent of intra-trading activities among firms within the domestic economy is also small (Ibeh 2000, OECD 1997, Bigsten et al 1998).

In many LDCs there is a lack of demand arising from low purchasing power (Goedhuys and Sleuwaegen1999, Rankin et al 2002). The Ghanaian economy is said to be relatively small, in comparison with some other LDCs such as Nigeria. For example in 2002 Ghana

had a total population of 20.3 million, and a GDP of US$6.16 billion. The comparative figures for Nigeria were population 132.8 million and GDP US$43.54 billion (The World Bank 2004) (see chapter one). This makes it highly important for small firms to enter into an export market in order to enjoy continued high growth rates (Söderbom 2001, Rankin et al 2002).

While firms in the wood processing sub-sector were largely exporting semi processed products to Europe, most firms within the other sub-sectors such as the metal works and plastics and rubber focused on the sub-regional market. We observed during the exploratory research that most firms avoided the developed markets, due to the lack of capacity to deliver high volume and meet the quality standards required in those markets. Export in the West Africa sub-regional market was therefore considered as an important factor for growth.

Export was expected to have a significant influence on growth; thus was included in our model.

The other side of the argument is that the business environment in Ghana and the political instability within the West African sub-region during the studied period might have made firms highly unwilling to enter into the export markets. It is also reported that firms in Africa face high transaction costs arising from factors such as poor quality of infrastructure (Söderbom and Teal 2003, Rankin et al 2002) and bureaucratic procedures when exporting. This was highlighted by one respondent during our qualitative interviews as follows:

"When we get to the borders we have problems like delays in crossing and extortion of money from us."

Lack of resources was also noted as a constraining factor for the firms to export especially the smaller ones. This was how one owner/manager who employed 15 people put the matter during our qualitative interviews:

"*Export has been my main ambition but I cannot export without having the required capital for the initial marketing of my products. No financial institution will be willing to offer me the support for marketing of my products outside Ghana.*"

We further noted that most firms had little knowledge and experience in the conduct of export trade. For example it was found during the qualitative interviews that some firms gave credit to customers abroad who had resulted in a high level of defaults. The firms could have used export trade instruments such as letters of credit.

Our empirical finding was that growth was positively influenced by the fact that a firm is engaged in an export activity. It was also observed that less than half (48 percent) of the firms were engaged in export. This confirms previous findings that many small firms do not export (Storey 1994, Ibeh 2000, Söderbom and Teal 2003, Söderbom 2001). According to Rankin (2002) out of 110 manufacturing firms sampled in Ghana, in the year 2000 less than a fifth of the firms were exporting. In Nigeria, Söderbom and Teal (2003) report that in a sample of 109 manufacturing firms only 8 percent were exporters. In Kenya, Söderbom (2001) notes that firms are largely focus on the domestic market

Table 9.2: Export Barriers

Our Findings	**Existing Findings**	
	LDCs	**DCs**
(1) Lack of knowledge and expertise. (2) Lack of resources. (3) High bureaucracy. (4) High default payment. (5) Trade restriction in sub-regional markets.	(1) Lack of knowledge and expertise. (2) Language barrier. (3) Lack of resources. (4) High transaction cost. (5) Political instability. (6) High focus on domestic market.	(1) Lack of knowledge and expertise. (2) Negative perceptions about foreign market risk. (3) Large size domestic market. (4) Language and cultural barriers.

In Table 9.2 above we present some of the factors limiting small firm export found in existing literature and our findings.

We performed multivariate analysis of variance (MANOVA) on the exporters and the non-exporters and in respect of the various growth categories. The aim of such an analysis was to ascertain the similarities and differences in growth factors that influenced the groups.

Table 9.3: MANOVA on Export and Growth Categories

Multivariate Tests	**Export**		**Growth Categories**	
	F-Ration	Sig.	F-Ration	Sig.
Pillai's Trace	6.169	0.000	4.306	0.000

P=.05

It was observed that at 5 percent level of significance the growth factors influencing exporters were significantly different from those that impacted on non-exporters as shown in Table 9.3 above. Similarly growth factors impacting on the various growth categories were also found to be significantly different.

In Appendix 9.1 we provide the similarities and differences in growth factors for the exporters and high growers groups that were found to be significant, together with brief comments arising from our exploratory research.

Further explanations of the growth factors impacting on export that were considered to be important determinants of growth are provided below.

The data further revealed that the larger firms were more likely to export than the smaller firms. For example as indicated in Table 9.4 below, 14 (25 percent) out of the 55 small firms were engaged in export as against 31 (67 percent) out of 46 and 14 (67 percent) out of 21 of the medium and large firm sized groups respectively. This finding is consistent with that of other researchers in LDCs (Soderbom and Teal 2003, Sarpong 2004, Naude and Serumaga-Zake 2001, Bigsten et al 1999, Söderbom 2001).

Table 9.4: Analysis of Exporting by Firm Size

Firm Size	Exporters		Non-Exporters		Total
	No. Firms	%	No. Firms	%	
Small	14	25	41	75	**55**
Medium	31	67	15	33	**46**
Large	14	67	7	33	**21**
Total	**59**		**63**		**122**

Soderbom and Teal (2003) using data from Ghana, Kenya, Nigeria, South Africa and Tanzania conclude that exporters in these countries are larger and have a higher level of capital intensity than non-exporters. Sarpong (2004) equally reports that less than half of the small firms in Ghana are engage in export however, about 73 percent of large firms are exporters. The strong relationship between export and firm size has been explained by the fact that there is a certain fixed cost due to high bureaucratic procedures, and the establishment of new marketing channels, that firms engaged in exports face, thus requiring a certain scale of operations to make exporting worthwhile (Söderbom 2001, Söderbom and Teal 2000). Firms entering the export markets also need to invest in equipment and technology to improve on their quality and cost competitiveness, as well as to have the ability to meet large orders in order to be successful (Sarpong, 2004). Earlier, Söderbom (2001) concludes that there is a strong positive relationship between firm size and export activities in Kenya. He reports that while in that country, 46 percent of medium-sized firms and 69 percent of large firms export, only 12 percent of small firms export.

This research found that the older firms were more likely to export than their younger counterparts. This is evidenced by the fact that 48 (81 percent) of the exporting firms were aged 6 years and above. This is consistent with the findings of Sarpong (2004), who argues that firms start exploring the international markets, obtain sufficient experience and then gradually become experienced exporters. Soderbom (2000) finds that in Ghana the age of a

firm has a significant influence on export with the probability of exporting increasing up to 26 years, thereafter decreases; however in Kenya age of the firm has no significant impact on export.

Our above finding is also consistent with the learning theory, which acknowledges that firms grow their export activities overtime as they gain more experience in the export market. Our observation was that firms tended to be cautious in growing their export activities within the West Africa Sub-Region due to perceived high risks. For example a firm which was exporting 70 percent of its output during the studied period noted as follows:

"We started with the local market before moving into the export market. We can even increase the exports but for the political and economic situations in these countries. If there is any political or economic problem it will affect our whole business."

We obtained evidence suggesting that firms with a foreign ownership had a higher likelihood of exporting. We noted from the exploratory research that the immigrant owner/managers were principally engaged in sectors that had higher export potentials such as wood processing, plastics and rubber products and more recently metal works. The immigrant firms were less constrained by human and financial resources, thus were able to enter and compete more effectively in the export market.

Sarpong (2004) however, notes that firms with some foreign participation tend to export less, as their main objective of producing in Ghana is not to explore the country's comparative advantages, but only to enter into the local market. This is supported by Goedhuys (2005) who argues that foreign firms enter into developing countries to take advantage of the local resources or demand to produce a product developed elsewhere. As indicated in Table 9.2, 18 (86 percent) out of the 21 firms producing plastics and rubber products were exporting as against 14 (64 percent) out of the 22 firms within the furniture

and wood processing sub-sector. The impacts of sector on export have been discussed in chapters 3 and 8.

Sarpong (2004) notes that aluminum and plastics and rubber products are predominately exported to the neighboring countries. This was also confirmed at the exploratory stage of this research (see chapter 3). In the food processing, and furniture and wood processing sub-sectors, Sarpong (2004) concludes that less than half of the firms export. Naude and Serumaga-Zake (2001) report that in South Africa firms operating within certain sectors are more likely to export than those found in other sectors. Firms in the food sector are the least to export (20 percent), while in the metal works 50 percent of firms export. Soderbom (2000) and Rankin et al (2002) conclude that in Ghana exporting is highly concentrated in the wood sector, whereas in Kenya and Zimbabwe exporters are much more spread across industries.

Table 9.5: Analysis of Exporters by Sector

	Exporters		**Non-Exporters**		**Total No. Firms**
	No. Firms	**%**	**No. Firms**	**%**	
Furniture and Wood Processing	14	64	8	36	22
Metal works	12	48	13	52	25
Food Processing	11	39	17	61	28
Paper and Printing	4	15	22	85	26
Plastics and Rubber	18	86	3	14	21
Total No. Firms/ (%)	**59**	**48**	**63**	**52**	**122**

Söderbom (2001) notes that, the East Africa sub-regional market offer only a limited potential for Kenyan exporters as any large increase in export quantity can cause a disproportionate fall in price due to the relatively small nature of that market.

Table 9.6 presents results of ANOVA tests performed to ascertain the extent to which the exporters and the non-exporters perceived the constraint factors. It was observed that the informal competition, lack of credit, impact of high rate of inflation and lack of efficient

technology were the constraint variables that were significantly perceived to have had varied impact on growth. In Appendix 9.2 we present our summary findings on how export impacts on growth.

Table 9.6: ANOVA – Constraints on Export

Constraint	F-Ratio	Sign	Exporters	Non-Exporters	Comments
Informal Competition	5.490	.021	Low	High	Increase in export reduces reliance on the local demand.
Lack of Credit	6.079	.015	Low	High	There are funds and grant to finance exporters. Financial institutions are more likely to fund exporters to earn foreign exchange.
Inflation	8.658	.004	Low	High	Exporters have higher sales margins to cushion local rising cost.
Technology	3.045	.084	Low	High	Exporters are more resourced and had higher knowledge.

9.3: Innovation

It must be noted that a survey data is limited for analyzing innovative behavior of firms, especially in LDCs where the traditional measures for innovation provide less information (Goedhuys, 2005). As stated earlier, our discussion of product innovation was in respect of products that were new to the firm regardless of the fact that such products existed and were being produced elsewhere.

What our research failed to analyze was the nature of the innovative activities that the owner/managers undertook. This is because we did not obtain data sufficient to allow for such an analysis to be carried out. This kind of analysis if undertaken could have improved our understanding as to the specific innovative activities that impacted on

growth among the sampled small firms. We argue for example that process innovation takes various forms including acquisition of new technology, equipment or machines, and improving quality standards in production. Moreover, the perception of what constitutes process innovation may differ among the owner/managers. The focus and effectiveness of these activities could differ from sector to sector (Smallbone et al, 1995). Barkham et al (1996) for example note that the fact that a firm undertakes innovative activities does not imply they are successful. Smallbone et al (1995) suggest that to obtain full understanding of the types of strategy used to manage production requires a qualitative interview. The above shortcomings notwithstanding a number of researchers have relied on survey data and have obtained interesting results (Goedhuys, 2005).

Our evidence suggests that a relatively less number of firms pursued high level of product innovations as a business strategy compared with process innovation. While 22 firms representing 18 percent of the 122 respondents indicated that they either very often or extremely often undertook product innovation, 73 firms (60 percent) indicated that they either very often or extremely often pursued process innovation. This confirms our earlier qualitative finding that most firms were improving on their production processes aimed at reducing cost and/or improving product quality. This became even more necessary in the light of the high import competition that the firms faced. Most of the firms had been using outmoded and less efficient equipment and technology which needed urgent changes. Most owner/managers interviewed complained about low labor productivity due mainly to the lack of commitment and skills, hence the replacement of labor with technology was considered as a more appropriate option.

9.3.1: Product Innovation

As noted by Barkham et al (1996) intuitively one may conclude that product innovation is positively associated with growth. However, Storey (1994) for example reports of mixed

evidence regarding product innovation and small firm growth. Jaumandreu (2003) notes that both process and product innovations are expected to impact on employment through different channels, and some impacts imply the reduction of labour for given tasks (displacement effects) while others imply creation of new labour needs (compensation effects).

Baldwin and Gellatly (2003) argue that notwithstanding the various perceived benefits associated with innovation, certain problems that can confront a firm during an innovative process will impede it. They state some of the problems as innovative strategies being risky; to the extent that new product introduction may fail to meet consumers' expectation. Additionally, innovators can face impediments such as lack of adequate resources to support costs of innovations (Edelman et al, 2002) which can be difficult to predict.

However, firms that are first to go to the market with a new product enjoy a period of good returns before the premium is eroded by competitors (Joyce et al 1996). This was confirmed by a respondent in one of our qualitative interviews.

"We introduced a product that required a higher technology to do, and everybody was left behind. Out of the 100 companies maybe two of us can do it. That protects us from competition."

Product innovation can lead to a wide range of products that a firm can offer, which can then lead to a higher growth (Smallbone et al, 1995). The introduction of new products can positively affect demand (Harabi, 2003). One respondent shared his opinion during the qualitative interview stage.

"Most Ghanaians are used to one type of furniture that is wood, but we try to innovate and bring in other materials like metal that makes our products nicer, different and overall boost sales."

We therefore took an initial view that the frequency at which new products were introduced would have a positive and significant influence on growth.

Our empirical evidence was that employment growth was positively influenced by product innovation. However, our finding was not only statistically non-significant, but was also less important in the determination of employment growth when compared with other strategic variables such as formal planning, marketing and export.

In the case of sales growth however, product innovation had a significant and positive impact. This implied that product innovation had a higher likelihood of leading to growth in sales than in employment. One plausible explanation was that the firms used the existing labor resources when introducing new products or those new products were largely replacement of existing ones. In the case of the latter no additional labor may have been required. Regarding the former growth in labor was expected, however this may not have happened instantaneously. A longitudinal research is required to appropriately study this phenomenon.

Another possible explanation why product innovation had less significant impact on employment growth could be due to a high level of imitation within the Ghanaian business community. This issue was widely brought up during the qualitative interviews. Some firms that were even successful in boosting sales through product innovation admitted that they were cautious in engaging additional labor, because the firms were uncertain as to how long other manufacturers would enter the product market to compete away any associated benefits.

We observed that for both the small and large sized firms, product innovation had negative impact on employment growth. This result can be due to lack of resources for the small firms to be effective as product innovators. The large firms may be leading product innovations but failed to reap long term benefits as they were soon copied by the medium firms.

Our finding is consistent with the previous finding of Smallbone et al (1995) who conclude that product innovation is not a more consistent characteristic of high growth firms. In

Morocco, Harabi (2003) finds that sales growth is positively related to product innovation, but not statistically significant. Jaumandreu (2003) using Spanish data to assess the impact of innovation on employment concludes that manufacturing firms tend to experience a real increase in productivity arising from innovation which negatively impact on employment growth.

Within the sample data, 22 firms representing 18 percent responded that they either very often or extremely often undertook product innovation. Product innovation is often less preferable by small firms because it is associated with high investment in marketing, research and equipment for products that have not been tried within a given market (Baldwin and Gellatly, 2003). Since most of the firms in our data set were resource constrained they were less likely to engage in product innovation. The less competitive nature of the business environment within the country may also have accounted for this situation.

The frequency at which the firms within the data set considered product innovation as a competitive strategy varied among the sub-sectors studied. For example within the plastics and rubber sub-sector 31 percent of the firms "very often" engaged in product innovation and further 78 percent of the firms were "extremely often" engaged in product innovation. The relatively high rate of the plastics and rubber sub-sector's innovation was found to be largely driven by the household plastics manufacturers (see chapter 3 section 3.4.3.2). For the paper and printing sub-sector no firm gave any indication that it did either "very often" or "extremely often" undertake product innovation during the studied period.

As argued by Barkham et al (1996) firms that wish to gain access to foreign markets need to be competitive. Export performance and the level of innovation are likely to be related, as firms which are more innovative are also more likely to explore external markets (Rogers, undated). One form of such competitive advantage is a firm's ability to introduce

new products. Our data suggested that firms that were more likely to engage in export were equally more likely to be involved in product innovations (see chapter 3).

Owner/managers who were highly interested in product innovation were found to have had prior industry experience, local experience and also had a high level of concentration on a single business. Such firms were often under the control of persons with less managerial experience. Other researchers have found strong relationship between top-management team education, and functional expertise and high level of innovation (Edelman et al 2002, Bantel and Jackson 1989, Covin and Slevin 1990).

Further analysis was conducted aimed at ascertaining the differences in growth factors between low and high product innovating firms. The sampled firms were categorized as either low or high product innovation firm based on the following: (a) firms which reported that they 'not often', 'little often' or 'often' engaged in product innovation were classified as low product innovation, and (b) firms which were either 'very often' or 'extremely often' product innovators were grouped as high innovation firms.

At 5 percent level of significance the factors that were found to be statistically significant in distinguishing firms that were high in product innovation from the low innovators by using ANOVA are reported in Table 9.7 below.

Table 9.7: ANOVA on Product Innovation

Variable	F-ratio	Sig.	Low Innovators	High Innovators
Owner/Manager Characteristics				
Owner's Age	7.201	.008	Old	Young
Firm Characteristics				
Paper & Printing	7.603	.007	Many Firms	Few Firms
Plastics & Rubber	23.878	.000	Few Firms	Many Firms
Business Strategy				
Low Cost of Production	5.318	.023	Low	High
External Training	11.514	.001	Low	High
Internal Training	4.788	.031	Low	High

P=.05

It was further observed that at 5 percent level of significance, there were no significant differences in the mean variance of the low and high product innovation groups with respect to the constraint factors. This suggests that the level of innovation within the firms were not significantly driven by the external environment but largely by factors internal to the firms. In Appendix 9.3 a summary of our findings of how product innovation impacts on growth is shown.

9.3.2: Process Innovation

Our focus on process innovation was to ascertain how frequently a firm undertakes to develop new technologies and improve its inputs use. Existing evidence suggests that firms that adopt process innovation as a business strategy benefit from higher productivity, improved product quality and lower average cost of production (Barkham et al 1996, Joyce et al 1996, Smallbone et al 1995, Baldwin and Gellatly 2003, Jaumandreu 2003). It was therefore our expectation that firms that focused on improving their production processes were more likely to achieve higher growth.

Process innovation though positively correlated with growth within the data set, was statistically non-significant at 5 percent level. Out of the 122 firms interviewed a total of 104 (85 percent) said they "often", "very often" or "extremely often" undertook process innovation.

However, process innovation had a higher positive impact on the growth of the large firms than the small and medium firms. As noted earlier the firms' ability to under take innovative activities were largely constrained by human and financial resources. As the effects of the above constraints were more severe among the smaller firms, it stands to reason that the latter would be less effective in process innovation.

Like product innovation, firms owned/managed by people with university education were more inclined to pursue process innovation. Within the data set 20 (69 percent) of the 29

owner/managers who were found to "extremely often" undertake process innovation had university education. A further 25 (57 percent) owner/managers who "very often" undertook process innovation out of a total of 44 firms had a university education.

Firms with foreign ownership were found to be more likely to pursue process innovation as a strategy than firms owned and managed by Ghanaians. Out of the 33 foreign owned firms 27 (82 percent) indicated that during the studied period they either "very often" or "extremely often" undertook process innovation. For the latter group 46 (52 percent) of the 89 firms had either "very" or "extremely often" engaged in process innovation during the period. The obvious explanation could be that foreign owners may have greater access to resources, knowledge and technology. If this finding is generally the case in Ghana, then process innovation among foreign owned firms can lead to a high technological spillover in the country. It should be noted that the foreign owned firms were found to be larger in size and were mostly engaged in sectors that required a higher level of technology e.g. wood processing.

Firms in the furniture and wood processing sub-sector were the most likely to engage in process innovation. For that sub-sector not less than 77 percent (17 out of 22) of the firms had either "very often" or "extremely often" engaged in process innovation. The finding was not surprising given the high regulations and controls imposed on the sector regarding extraction of timber resources, a major input for the sector. Firms were therefore seeking ways to increase efficiency in the use of raw material inputs. The least process innovating sub-sector was paper and printing which had 11 (42 percent) of the 26 firms operating within the sub-sector indicated that they either very often or extremely often undertook process innovation. Goedhuys (2005) observes sectoral variations in connection with innovative activities in Tanzania to the extent that the plastics, metal working and textiles sectors are the most innovative sectors in that order.

The large and medium size firm groups had slightly a higher proportion (62 percent and 63 percent respectively) of firms that either "very often" or "extremely often" undertook process innovation. Some existing empirical evidence however, suggests that small and large firms have different innovation profiles (Rogers undated, Nooteboom, 1994, Almeida and Kogut 1997, North and Smallbone 1996, Leaner 2003, Acs and Audretsch 1990, Plehn-Dujowich 2003, Rothwell 1989). The findings of North and Smallbone (1996) support the position that small firms tend to be less process innovative. As argued by Schumpeter (1934) and supported by Rothwell (1989) small firms' innovativeness is usually hindered by lack of financial resources, as they have a small budget for research and development and limited manpower. Goedhuys (2005) finds that in Tanzania, large firms are more likely to innovate than small firms. It was argued that in developing countries where markets for finance, technology and information were less perfect, and biased towards larger and foreign owned firms, opportunities for innovating activities were more favorable to these firms. Goedhuys (2005) however, concludes that small and medium size firms in LDCs offset the disadvantage associated with size through inter-firm collaboration and linkages.

There was an indication that firms that were high on process innovation as a business strategy had owner/managers with higher prior industry experience, higher managerial experience and also with higher local experience. The owner/managers of these firms had a higher level of focus on a single business as well. For example out of the 73 firms that responded that they either "often" or "extremely often" pursued process innovation 59 percent (43 firms), 66 percent (48 firms) and 77 percent (56 firms) respectively had owner/managers with prior industry experience, managerial experience and local experience. While 22 (30 percent) of these firms were owned/managed by persons who had other businesses.

In Malaysia, Lee (2003) reports that high innovating firms tend to be large, young and are more likely to produce for the domestic market. However, there is no evidence to suggest that foreign ownership is associated with greater innovative activities in that country.

Like product innovation ANOVA was performed aimed at ascertaining the differences in growth factors of the high and low process innovation firms. The results of the ANOVA are reported in Appendix 9.4 with comments, whiles Appendix 9.5 presents a summary of findings relating to process innovation and its impact on growth.

Similar to product innovation, it was observed that at 5 percent level of significance there were no significant differences in the mean variance in the constraint factors of the low and high process innovation firms (see section 9.2.2).

9.4: Marketing

An effective marketing strategy is a vital component of business survival and growth in both developed and developing countries due to an increase in competition (Appiah-Adu, 1998). However, many small firm owner/managers pay less attention to marketing, often regarding its activities as solely meant for large firms (Barkham et al 1996, Stokes 2000). According to Stokes (2000) marketing represents a key management discipline, which distinguishes between survival and failure of small firms.

Stokes (2000) and Hogarth-Scott et al (1996) view marketing as an important factor in the early years of a firm's history as younger firms normally have relatively a small customer base which makes them more vulnerable. Hogarth-Scott et al (1996) acknowledge that a knowledge and understanding of the marketplace reduces risk and contributes to the understanding of customer needs. In short, research findings support the view that firms that give a higher consideration to marketing activities perform better than those that do not (Peters and Waterman 1982, Brooksbank et al 1992, Siu 2000).

We measured the importance of marketing based on the amount that a firm spent on marketing as a percentage of sales. While 40 percent (49 firms) of the 122 respondents spent nothing on marketing during the studied period, 40 percent (49 firms) had an average expenditure level of not greater than 5 percent of sales. The remaining firms representing 20 percent (24 firms) spent between 6 to 20 percent of sales on marketing activities. The relationship between marketing and growth was found to be positive and significant at 1 percent level of significance. However, as argued by Barkham et al (1996) a difficulty exits in identifying whether higher marketing activities lead to growth or that growing firms have the resources to increase marketing activities. This is because firms that are growing and profitable may be spending more on marketing activities believing that such an expenditure will lead to further growth.

Our finding confirms existing theory that not all small firm owner/managers undertake marketing activities. Even within our highest growth firm group 27 percent had no marketing expenditure. This supports the argument of Winston and Dadzie (2002) that in sub-Saharan African countries marketing concepts are so abstract that many firms are likely to pay a lip service to it. Unlike the highly competitive market environment in the developed countries, firms in Africa may pay less attention to marketing activities because demand normally outstrip supply in many sectors (Winston and Dadzie 2002, Dadzie 1989, Appiah-Adu 1998). We provide below some of the factors that limit small firms' marketing.

Table 9.8: Factors Limiting Small Firms' Marketing

Our Findings	Existing Findings	
	LDCs	**DCs**
(1) Lack of resources. (2) Lack of expertise. (3) Lack of support. (4) High inflation (i.e. makes firms less competitive).	(1) Demand outstrips supply. (2) Low competitiveness. (3) Lack of resources. (4) Lack of expertise. (5) Unstable environment.	(1) Restricted resources. (2) Lack of expertise. (3) Limited impact.

It was observed however, that firms within our data that faced high import competition resorted to high level of marketing (see Table 9.9 below). It was noted during the exploratory research that some of these firms had remained in business due to their aggressive marketing strategy. However, for the majority of the firms resorting to high marketing strategy adds to their ready high cost of product. These latter group of firms were less likely to sustain higher cost of marketing impose on them by the external environment, thus leading lower growth and complete firm failure.

ANOVA tests were performed to identify growth factors that had relationships with higher marketing activities. It was our view that such an analysis would provide better understanding of how marketing impacted on growth and also identify the type of firms that used marketing as a growth strategy. The sampled firms were grouped into two (i.e. Marketing oriented and non-marketing oriented firms). The results of the ANOVA tests are shown in Table 9.9 below.

Table 9.9: ANOVA on Marketing

Variable	F-ratio	Sig.	Non-Marketing Oriented	Marketing Oriented
Owner/Manager Characteristics				
Prior Industry Experience	9.589	.002	Low	High
Years of Experience	6.407	.013	Low	High
Local Experience	6.405	.013	Low	High
Education	14.992	.000	Low	High
Age	4.140	.044	Low	High
Firm Characteristics				
Size	11.785	.001	Small	Large
Furniture & Wood	22.659	.000	Many Firms	Few Firms
Plastics & Rubber	4.815	.030	Few Firms	Many Firms
Business Strategy				
Export	4.524	.035	Low	High
Low Cost Products	4.334	.039	Low	High
Large Scale Production	5.429	.021	Low	High
Business Planning	17.471	.000	Low	High
Constraints				
Late Payments	6.578	.012	Low	High
High Imports	14.105	.000	Low	High
High Bureaucracy	13.515	.000	Low	High

P=.05

The owner/manager characteristics that were found to impact on the level of marketing orientation were prior industry experience, years of experience, local experience, level of education and age of the owner/manager. The above findings indicate that the level of human capital of the owner/manager was the most important factor that determined the level of marketing orientation. The high levels of human capital factors were clearly important in the determination of the effectiveness of undertaking marketing activity as a growth strategy. The importance of human capital to the type of marketing strategy to be adopted was expressed by one owner/manager who had over thirty years of experience in the food processing sub-sector.

"If one is marketing food it is totally different from say marketing computers. So one wants to be able to research into the marketing activities and have full understanding before one can be successful."

We observed during the qualitative research stage that 10 (75 percent) out of the 15 sampled owner/managers expressed their own lack of knowledge about how marketing activities can effectively be conducted. When asked to mention one most important area of operations that they would want a consultant to assist, 11 out of the 15 owner/managers mentioned marketing.

Regarding the impact of education on marketing orientation our finding is consistent with that of Winston and Dadzie (2002) who, using data from two African countries Nigeria and Kenya, conclude that the level of education (especially in marketing) is positively associated with marketing orientation. It can further be argued that in many African countries the low level of marketing training and practices among top executives make them less likely to pursue marketing as a growth strategy (Appiah-Adu 1998, Dadzie 2002, Mitchell and Agenmonmen 1984).

A relationship was found between firm size and the level of marketing orientation. The smaller firms spent less on marketing (see chapter 3). As shown in Table 9.10 out of the 55 firms classified as small firms within our firm size classification, 55 percent (30 firms) had no expenditure on marketing with further 24 percent (13 firms) spending no more than 5 percent of their sales on marketing per annum. In the case of medium firms, 37 percent (17 firms) and 46 percent (21 firms) out of 46 firms had no marketing expenditure and up to 5 percent of sales as marketing expenditure respectively. For the 21 large firms, 71 percent (15 firms) and an additional 19 percent (4 firms) were spending an average of not less than 5 percent and 10 percent respectively of sales revenue on marketing activities annually.

We also observed that the high marketing oriented firms had a higher level of export orientation, were mostly into the production of low cost products with a wide of

distribution network. Such firms were also mostly into a large scale production and were more likely to have had a business plan.

Finally, firms that faced high levels of delayed payments, import competition and bureaucracy had a higher level of marketing orientation. In the case of delayed payments and high bureaucracy, the plausible explanation could be that the firms were dealing mainly with state institutions and/or large private institutions. The bureaucratic tendencies in these institutions were possibly causing the delayed payments. These firms were therefore attempting to diversify their cliental through high marketing activities. Faced with a high level of import competition some local manufacturers had been forced to move into a high level of marketing as strategy. While high marketing orientation can provide a competitive advantage, it can also increase cost and make the firms rather less competitive.

Table 9.10: Analysis of Marketing Expenditure by Firm Size

Marketing Expenditure	**Small Firms**		**Medium**		**Large Firms**	
	No. Firms	**%**	**No. Firms**	**%**	**No. Firms**	**%**
Zero %	30	55	17	37	2	10
1-5 %	13	24	21	46	15	71
6-10 %	10	18	6	13	4	19
Above 10 %	2	4	2	4	-	-
Total	**55**	**45**	**46**	**37**	**21**	**17**

Lack of resources and marketing know-how within the small firms are some of the widely assigned reasons why small firms are less likely to undertake marketing activities in both developed and developing countries (Winston and Dadzie 2002, Hogarth-Scott et al 1996, Deng 1998, Akaah et al 1988). In their study using data from five African countries, Akaah et al (1988) for example, conclude that foreign owned firms perform conventional marketing activities more frequently than their local counterparts as the former firms have more resources.

The plastics and rubber sub-sector was found to be the most marketing oriented sub-sector, followed by the food processing sub-sector. The furniture and wood processing sub-sector was the least likely to pursue marketing activities as a business strategy. For example within the plastics and rubber, and the food processing sub-sectors 81 percent (17 out of 21 firms) and 75 percent (21 out of 28 firms) respectively indicated that they spent a proportion of their sales on marketing activities.

Table 9.11: Summary Findings- Marketing

	Our Findings	Existing Findings		Comments
		LDCs	DCs	
(1) Relationship between marketing and growth.	Positive	Positive	Positive	Faced with a high level of import and informal competition firms within our data set resorted to high marketing to boost sales.
(2) Proportion of firms that undertake marketing.	Small	Small	Small	See Table 9.8

9.5: Business Planning

The relationship between business planning and performance of a small firm is a widely studied with varying results (Mazzarol 2001, Storey 1994, Robinson et al 1984, Olson and Bokor 1995, Marsden and Forbes 2003, Hannon and Atherton 1998). Some researchers argue that formal planning is less appropriate within the context of small firms, thus has limited benefits to the financial performance of these firms. Most small firm owners are without a formal business plan for reasons such as lack of knowledge, confidence and skills to undertake formal planning (Mazzarol 2001, Sexton and Van Auken 1985).

Empirically, some researchers have found evidence in support of formal planning having a direct and positive relationship with performance (Robinson et al 1984, Olson and Bokor 1995, Sexton and Van Auken 1985, Berman et al 1997, Matthews and Scott 1995, Mazzarol and Ramaseshan 1998, Rue and Ibrahim 1998). Others have also reported no significant relationship between the two (Ackerlsberg and Arlow 1985, Hannon and Atherton 1998). Though studies such as the above suggest that a relationship exists between planning and performance, there remains a difficulty in identifying a clear linkage between the two (Mazzarol, 2001).

According to Yusuf and Saffu (2005) the lack of inconsistency in findings may be an indication that performance is influenced more by the content of a plan than the process of planning itself. They further note that in spite of the fact that the relationship between planning and performance has been widely studied; only a few studies have looked at the relationship under a transitional environment, where firms face adverse conditions.

We included business plan in our model by ascertaining whether a firm has a business plan or not. A written plan as a measure of planning variable has been used by other researchers such as (Berman et al 1997, Gable and Topol 1987, Cragg and King 1988, Mazzarol 2005, Perry 2001). In all 51 (42 percent) of the sampled firms had no business plan. There was also a positive and significant relationship between business planning and growth. A summary of factors limiting small firms' planning orientation is provided in Table 9.12 below.

Table 9.12: Factors Impacting on Business Planning

Our Findings	Existing Findings	
	LDCs	**DCs**
(1) High level of informal competition. (2) Lack of demand. (3) Lack of support. (4) Lack of resources. (5) Lack of knowledge and expertise. (6) Unstable environment.	(1) Adverse economic conditions. (2) Resource constraints. (3) Lack of knowledge and expertise.	(1) Lack of knowledge, confidence and expertise. (2) Resource constraints. (3) External environment.

Our findings indicate that not all small firm owner/managers undertake planning which is consistent with some earlier findings (Patterson 1986, Matthews and Scott 1995, Bhide 1994, Robinson and Pearce 1984, Yusuf and Saffu 2005). Some of these researchers argue that in transition and developing economies small firms are less likely to pursue business planning as a strategy due to resource constraint. Yusuf and Saffu (2005) for example concluded that in Ghana, economic difficulties have discouraged small firms from pursuing business planning and that firms which engage in planning do not experience any difference in their performance levels compared to those who do not plan.

Table 9.13: ANOVA on Business Planning

Constraint	F-Ratio	Sig.	Mean Score		Severity of Constraint on Sub-Sector.				
			No Planning	Planning	Furniture & Wood	Metal	Food	Paper & Printing	Plastics & Rubber
Informal Competition	5.050	.026	3.16	2.62	Medium	High	Low	High	Low
Lack of Demand	5.026	.027	2.47	2.01	Low	Medium	Low	High	High
Support System	7.507	.007	3.47	2.92	Low	High	High	Low	High
Lack of Credit	8.267	.005	3.71	3.10	Medium	Low	High	High	High
Lack of Inputs	5.915	.016	3.80	3.39	Medium	Medium	Low	High	High
Inefficient Technology	7.156	.009	2.96	2.45	High	Low	High	High	Low
Planning Mean Score					0.41	0.56	0.75	0.50	0.67

P=.05

To properly understanding the effect of the external environment on the planning behavior of the sampled firms ANOVA test was conducted. The firms were divided into two groups (i.e. firms that used planning as a strategy and those which did not). The constraint factors that were identified as having significant impact on planning together with other findings are reported in Table 9.13 above. Some comments on the above results are also provided below.

It was observed that planning was less prevalent among the firms that faced high level of informal competition, lack of demand, lack of efficient support, lack of credit, lack of inputs and inefficient technology as measured by their higher mean scores.

It was noted that firms that were highly constrained by the activities of informal businesses were mainly located in the metal works and the paper and printing sub-sectors. These two sub-sectors had the highest percentage of small size firms (See Chapter 5). Coupled with

our finding that the level of planning was affected by firm size, it can be concluded that the small firms in the metal works and the paper and printing sub-sectors, though faced a high level of informal competition were less likely to plan. These findings may imply that the growth rates of the small firms within the two sub-sectors had been limited by these firms inability to adopt business planning as a way of being different from the informal businesses within the sub-sectors.

The extent to which a lack of demand was constraining the operations of the firms was greatest among the paper and printing and the plastics and rubber sub-sectors. In the case of the plastics and rubber sub-sector the incidence of planning was relatively high especially among the larger firms. It can therefore be argued that it were mainly the small firms in the plastics and rubber sub-sector in addition to some firms in the paper and printing sub-sector which though faced a high level of demand constraint yet were less likely to have had formal planning strategy.

Firms within the metal works, food processing and plastics and rubber sub-sectors which were most severely affected by lack of efficient support system were found to be less likely to plan. However planning was predominately used by firms in the food processing (mean score 0.75) and the plastics and rubber (mean score 0.67) sub-sectors. Our finding may imply that some firms especially within the metal works, food processing and plastics and rubber sub-sectors needed support in the form of business planning.

The lack of credit was found to be most severe among firms in the food processing, paper and printing and the plastics and rubber sub-sectors. In this instance it was more likely that firms that had no business plan were less likely to attract financial support from the financial institutions. This was because most financial institutions required business plan when granting financial assistance.

Skrt and Antončič (2004) using a sample of 114 small firms in Slovenia find no evidence suggesting that planning does matter in small firm growth. In addition they find that about

30 percent of firms based their decisions on intuition. Matthews and Scott (1995) find that the level of sophisticated planning decreases with an increase in the level of environmental uncertainty. We provide below the manner that one respondent expressed the issue during one of the qualitative interviews.

"Having been in the West Africa market and from my experience, I see that doing projections for 3 – 5 years are usually way off what actually it is at that time. There are too many unforeseen factors that can affect your production and sales. Any plan that is more than 12 months will just be a piece of paper."

A number of researchers find that planning is an important ingredient to achieve success (Ibrahim et al 2004, Aram and Cowen 1990, Rue and Ibrahim 1998, Baker et al 1993). In the USA Ibrahim et al (2004) find that about 81 percent of small businesses do prepare some type of business plan. While Schuman et al (1985) found that 49.9 percent of small firms prepare plans. Of this 92 percent reported that it was beneficial. Firms that have plans are more likely to achieve a higher growth rate than those without a plan (Robinson and Pearce 1984).

Having found that planning had a positive relationship with growth, we were interested in ascertaining the type of owner/manager and firm characteristics that had links with business planning. It was our expectation that firms that were high on planning would complement it with some other growth strategies. To achieve the above objectives ANOVA tests were performed between firms that engaged in planning and those which did not. The findings are as shown in Appendix 9.6.

An analysis of the relationship between business plan and the characteristics of the owner/managers revealed that owner/managers with university education were more likely to prepare a business plan. Within the data set 49 firms representing 75 percent of firms owned/managed by persons with university education had a business plan, as against 22 (39 percent) of firms owned/managed by people who have lower educational background.

It was also found that smaller number of Ghanaian small firm owner/managers undertook to prepare a business plan, when compared with immigrant owner/managers. For example 26 (79 percent) of the 33 immigrant owner/managers responded that they have business plans, while 45 (51 percent) out of 89 of their Ghanaian counterparts prepare business plans.

In Ghana, Yusuf and Saffu (2005) argue that the effect of education on performance is clearly seen in industries where a higher level of education is required to be successful. Lee and Matthews (1999) also report that education has a positive effect on growth through increased in planning. Yusuf and Saffu (2005) again report that planning in small firms are highly influenced by the preferences, experiences, attitudes, prejudices and the general personality sets of the entrepreneur. They find that in the Ghanaian context education had no clear relationship with business planning. They however, pointed out that their sample was biased in favor of owner/managers with high level of education.

Prior experiences in respect of managerial and industry and the number of years experience were found to be positively correlated to business planning.

Our other evidence was that 77 percent (54 firms out of 69) and 75 percent (47 firms out of 69) firms with owner/managers who had managerial experience and prior related business experience respectively were engaged in planning. Olson and Bokor (1995) arrive at similar results and conclude that prior managerial experience and previous work experience are significant determinants as to whether a firm will engage in planning or not. McCarthy (2003) suggests that the planning process is driven by the characteristics of the owner/manager which is affected by his/her experience of crisis.

In Australia (developed economy), Mazzarol (2001) finds that a high level of management education increases the emphasis that is placed on formal business planning. It was further noted that increasing firm size by way of number of employees lead to the increase in the

engagement of more professional managers who are more interested in the use of business plan as a management tool (Yusuf and Saffu 2005, Mazzarol 2005).

Other factors that were found to affect business planning were the age of the firm, size and the sector within which a firm operates. While there was no difference between the number of firms aged 6 years or below which had a business plan and those without a plan, 62 percent (52 firms) of those firms aged above 6 years a had business plan. Firms within the food processing sub-sector were most likely to use business planning as a strategy, while the furniture and wood processing firms were the least likely to prepare a business plan.

The larger firms were found to be more likely to use business plan as a strategy than the smaller firms. Some of our findings are consistent with the findings Yusuf and Saffu (2005). For example they find that older firms are more likely to engage in planning than the younger ones. Their argument is that younger and smaller firms plan in order to attract funding from financial institutions who most often demand planning documents. This argument is supported by other researchers (Risseeuw and Masurel 1994, Perry 2001, Hannon and Artherton 1998). According to one respondent of our qualitative interviews who owned/managed a medium sized firm, planning reduces flexibility.

"The smaller firms are doing their own thing without regard to formalized plan which makes them faster and more flexible."

We observed that firms that adopted business planning as a growth strategy complemented it with other strategies such as export, marketing, large scale production, process innovation and niche market. Summary of findings are reported in Appendix 9.7.

9.6: Staff Training

The abilities and skills of managers and employees of small firms which can be enhanced through training are important factors that influence performance (Nottinghamshire Research Observatory 2002a, Savery and Luks 2004, Jones 2004, Westhead and Storey

1996, Westhead and Storey 1997, Robertson 2003, Huang 2001, Cosh et al 1998, Kerr and McDougall 1999, Patton and Marlow 2002). It is argued that for a successful transfer of technologies from advanced economies to LDCs there is the need for local firms to build the skills and knowledge required to adapt and improve those technologies (Shi 1998, Robertson 2003). Huang (2001) continues the argument by pointing out that a well-trained work force is considered as an essential ingredient for achieving and maintaining competitive advantage. Training is therefore considered as a powerful vehicle to be used to achieve growth within small firms (Westhead and Storey 1997, Huang 2001).

In spite of the perceived positive correlation between training and performance, the empirical evidence shows that in many smaller firms training is low (Patton and Marlow 2002, Maton 1999). It has however, been pointed out that it is formal training which is less popular among smaller firms (Nottinghamshire Research Observatory 2002b) but not informal training. According to Huang (2001) one of the major reasons for the inconsistent findings regarding the relationship between training and small firm performance is due to the widely varying definition of training that researchers employ.

In the light of the above theoretical underpinnings we ascertained the impacts of both formal and informal training on growth. Using the works of Nottinghamshire Research Observatory (2002b) informal training was defined as unstructured and unplanned form of training, conducted by a person with no training experience but conduct the training based on knowledge of the procedure. Any other form of training was considered as formal training.

The two forms of training were measured by the frequency at which they were undertaken using a 5 point scale (1 not often, 2 little often, 3 often, 4 very often and 5 extremely often).

Our results showed that both forms of training were not significant contributors (measured by their coefficients and statistical significances) to small firm growth within the data set.

However, informal training was included in our growth model due to the above theoretical consideration and the fact that a lot more firms did indicate that they frequently pursue informal training rather than formal training.

Our findings are consistent with that of some small firm researchers who reported either no significant connection or negative relationship between training and firm performance (Baldwin et al 1994, Wynarczyk et al 1993, Cambridge Small Business Centre 1992, Westhead and Storey 1994, Marshall et al 1995).

Westhead and Storey (1994) and (1997) after reviewing some existing studies conclude that there is no substantial evidence in support of training, having a positive link with performance. However, Cosh et al (1998) find positive relationships between formal training and employment growth when 1, 640 small firms in the UK were examined. More recently, Patton and Marlow (2002) conclude that researchers are finding it difficult to obtain evidence to support the proposition that investment in training will lead to performance within small firms.

We found strong evidence suggesting that many small sized firms prefer to use informal training methods rather than formal methods. For example 66 firms (66 percent) out of the 122 firms sampled indicated that they did "not often" use formal planning with a further 26 firms (21 percent) indicating that they only "little often" use formal planning. On the other hand 40 (33 percent) and 46 (38 percent) of the firms reported that they "very often" and "often" use informal training respectively.

Supporting the findings that the use of training methods vary among small firms, Huang (2001) argues that a high level of training sophistication leads to a high level of effectiveness. The high level of informal training in LDCs is said to be a reflection of a high reliance on production and export of primary products and less developed and competitive consumer markets (Jackson, 2002). In Mozambique, Webster and Wood (2005) report that within a sample of 177 firms 69 percent were involved in informal

training and conclude that it is the most feasible option given the adverse external conditions such as limited official educational facilities and programmes, limited high growth potential jobs, few governmental programmes for personal development and limited wealth creation opportunities in the private sector. It can also be due to the nature of labor process in the firms themselves combined with lack of time and financial resources (Curran et al 1996, Patton and Marlow 2002).

Westhead and Storey (1997) suggest that even within the small firm sector, the smaller firms are less likely to provide training of any type to their employees compared to their larger counterparts. The likelihood of using training as a strategic tool increases with the size of the firm (Storey 1994).

Our findings are consistent with the above. Within our data set, 11 firms (20 percent) of the 55 firms classified as small indicated that they did "not often" engage in informal training as against 2 firms (4 percent) out of the 46 medium firms and 1 (5 percent) 21 of the large firms. Some other researchers have arrived at a similar conclusion that larger firms are more likely to use training opportunities (Savery and Luks 2004, Nottinghamshire Research Observatory 2002a, Kitching and Blackburn 2002).

This position is widely explained by the lack of resources within the smaller firms and the fact that returns from training may fall short of benefits expected to be derived (Robertson 2003, Savery and Luks 2004, Storey 1994, Westhead and Storey 1997, Kitching and Blackburn 2002, Edelman et al 2002). There is a further argument that in LDCs, smaller firms are highly dependent on the actions of their governments who provide resources and guidance for the training needs of small firms. Even where resources are available the small firms' owner/managers lack enough knowledge to make the right investment decisions about training and skills needs Robertson (2003). The latter reason referred to as the 'ignorance argument' has been used earlier to explain the phenomenon as it exists in

advanced countries (Westhead and Storey 1997, Storey 1994, Kitching and Blackburn 2002).

Storey (1994) argues that growing firms are more likely to base their competitive advantages on the skills of their employees, thus might encourage employee training to a higher extent than slow or no-growth firms. Our evidence somehow supports the above position. Within the 66 firms that either anticipated no growth or growth rates not exceeding 10 percent during the studied period, 22 (36 percent) of them reported that they either "very often" or "extremely often" undertook informal training. In the case of the 8 firms that anticipated growth rates exceeding 50 percent, 5 (63 percent) indicated that they either "very often" or "extremely often" trained staff. However, firms that had anticipated growth rates between 21-50 percent were the least to frequently train their staff as 33 percent of these firms either "very often" or "extremely often" undertook staff training.

Other researchers have also found evidence that low-growth small firms are less likely to offer training to their staff (Jones 2004, Kerr and McDougall 1999, Westhead and Storey 1997, Hughes 1997, Nottinghamshire Research Observatory 2002b, Savery and Luks 2004). The link between growth and the high likelihood of undertaking staff training has been established but, what remains unclear is whether training leads to successful firm or that firms that are doing well have time to pursue training activities (Nottinghamshire Research Observatory 2002b).

Table 9.14: Summary Findings-Training

	Our Findings	**Existing Findings**		**Comments**
		LDCs	**DCs**	
(1) Relationship between training and growth.	Positive	Mixed	Mixed	Training had a positive impact on growth but not significant.

9.7: Conclusion

The empirical data showed that small firm growth was positively and significantly influenced by the fact a firm exports. We also confirmed the existing theory that many small firms in LDCs do not export and that larger firms are more likely to export than smaller firms. We observed that both product and process innovations are positively related to growth, though statistically non-significant. We noted that the larger firms, firms owned/managed by people with university education as well as firms engaged in export were more likely to pursue product and process innovations.

The relationship between marketing and growth was found to be positive and significant at 1 percent level of significance. Firm size was also found to be positively correlated with marketing activities. Firms owned/managed either by university graduates or immigrants were found to be more likely to undertake a higher level of marketing activities.

Business planning and staff training had positive impacts on growth. Many of the firms preferred the use of informal training to formal training. Larger firms were more likely to pursue both business planning and staff training as business strategies than the smaller firms.

Chapter Ten

The External Environment- Constraints to Growth

10.1 Introduction

While it has been established empirically by researchers that some owner/managers of small firms will pursue growth (Barkham et al 1996, Storey 1994, Bridge et al 2003), actual growth may elude some growth oriented firms due to the constraints they face (Barkham et al 1996, Baah-Nuakoh 2003, Bartlett and Bukvic 2001, Aidis 2003, Storey 1994, Brown et al 2004, Goedhuys and Sleuwaegen 1999).

The other side of the argument is that since not all small firm owner/managers will seek growth, lack of growth on its own does not necessarily indicate the presence of high barriers to growth (Bartlett and Bukvic, 2001). Within our data set 27 percent (33 firms) out of the 122 firms sampled did not anticipate any growth during the studied period.

There were however, some firms that did not achieve their anticipated growth rates (see section 7.2). This was an indication that growth intention was not enough to achieve actual growth, and that growth can be constrained by factors outside the internal environment of the firm and other factors such as change of management.

From the initial exploratory interviews and existing literature the respondents were asked to indicate how the twenty one constraining factors had impacted on growth during the studied period using a scale of '1 not important', '2 little important', '3 important', '4 very important' and '5 extremely important'.

The highest mean score recorded was 3.99 and more than half (13) of the constraint variables had mean scores in excess of 2.5. This may be an indication that a large number of the respondents viewed some of the variables as highly constraining growth. The twenty one constraining variables were drawn out of existing literature and the results of the initial exploratory research.

We analyze the constraining variables in four sets and also provide our revised model of constraints to small firm growth in LDCs based on the empirical evidence obtained.

Institutional Barriers

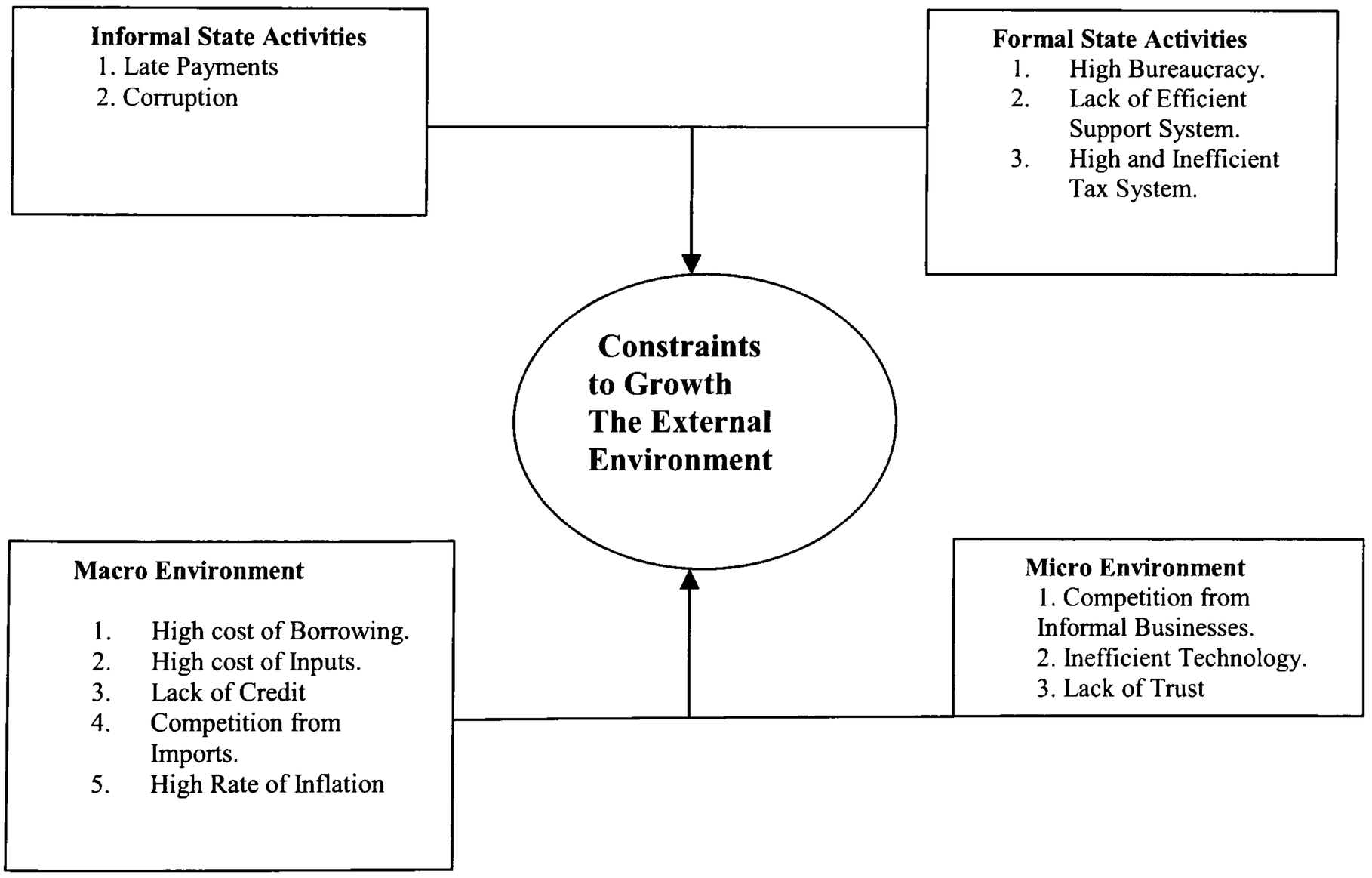
(a) Formal State Activities: High Bureaucracy, Lack of Efficient Support System, and High and Inefficient Tax System.

(b) Informal State Activities: Late Payments of Bills and Corruption.

(c) Macro Environment: High Cost of Borrowing, High Cost of Inputs, Lack of Credit, Competition from Imports and High Rate of Inflation.

(d) Micro Environment: Lack of Trust and Honesty, Competition from Informal Businesses and Inefficient Technology.

Figure 10.1: Revised Model of Constraints to Growth of Small Firms-LDC



10.2: Institutional Barriers

10.2.1: Formal State Activities

High bureaucracy (mean score 3.4) emerged as the most constraining factor to growth under formal state activities and the forth most important constraint out of the 21 barriers included in the survey.

Table 10.1: Analysis of High Bureaucracy

Perceived Impact	No. Firms	%	Cum. %
Extremely Important	15	12	12
Very Important	59	48	60
Important	25	21	81
Little Important	6	5	86
Not Important	17	14	100
Total	**122**	**100**	
Mean Score (Max. 5)	3.4		

The descriptive analysis of how the owner/managers perceived the factor is provided in Table 10.1 above.

Bartlett and Bukvić (2001) find high bureaucracy as one of the most constraining institutional factors in Slovenia (Transitional economy). They conclude that business growth is often at risk from heavy-handed bureaucracy.

A heavy regulation of the business environment within an economy provides an incentive for entrepreneurs not to grow their businesses beyond a certain size so as to avoid such high regulations (Trulsson 2002, Bartlett and Bukvić 2001, de Soto 1989). The uneven effect of high bureaucracy on firm size was evident within the data set. The medium to large sized firms were the most affected by the effect of high bureaucracy. Baah-Nuakoh (2003) equally reports that in Ghana regulations have greater impact on larger firms than small firms and also affect the wood sector the most. Goedhuys and Sleuwaegen (1999) find that in Burundi regulation seems to be less constraining for micro-enterprises and

small firms and also had lesser impact on the growth of the older firms, and firms owned by immigrants with an emphasis on the Asians.

10.2.2: Support System

An inefficient support system was ranked the most important constraint (mean score 3.15) ahead of factors like competition from imports, high and inefficient tax system, high inflation and corruption. The level of importance of inefficient support system as a constraint was highest among the food processors (mean score 3.43), whiles firms within the paper and printing sub-sector complained the least. The decliners (mean score 3.74) and the high growers (mean score 3.37) complained the most. We observed that the perceived effect of lack of an efficient support system was size related, with the smaller firms complaining the most while the larger firms complained the least.

In Slovenia, Bartlett and Bukvić (2001) report that entrepreneurs do not rank lack of support as any serious barrier. However, the writers could not decide on whether that country's support systems for small firms were just adequate and successful or those support systems were of less relevance to the small firms. In Kenya, lack of efficient support system is viewed as a major constraining factor especially among smaller firms and those that experience decline in their employment base (Söderbom, 2001).

10.2.3: Tax System

A high and inefficient tax system has the potential to distort economic activities in a number of ways including savings, investments, labor markets and firm growth. In particular high taxes reduce incomes to entrepreneurs thus impeding firms growth rates (OECD 1998). It is further noted that the consequences of high taxes are felt most severely by high growth firms. Finally, OECD (1998) and de Soto (1989) view high tax rates as

providing an incentive for tax avoidance and evasion, which can lead to the growth of the informal sector of an economy.

Our data showed that high and inefficient tax system was ranked the ninth most important constraining factor with a mean score of 2.98. Its effects were most constraining among those firms that experienced negative growth rates (mean score 3.63), followed by firms within the stable growth category (mean score 3.5). The severity of the factor was higher among the high growers (mean score 3.41) than the growers (2.84).

Further analysis indicated that a positive relationship existed between the severity of a high and inefficient tax system and firm size. The large firms were more likely to cite the impact of the variable as of high importance (mean score of 3.19), while for the small firm it was comparatively less important (mean 2.80). One plausible explanation is that small firms are in better position to act in a manner to avoid tax payments as compared to large firms whose activities are most often within the reach of the tax authorities.

The constraining effects of a high and inefficient tax system was most severe among firms within the plastics and rubber sub-sector (mean score 3.57), followed by the paper and printing sub-sector (mean score 3.50). The food processing sub-sector was the least affected. This may be due to the fact that firms within the food processing sub-sector enjoy corporate tax holidays for the first five years of operations, and tax losses are allowed to be carried forward.

We provide below the observation of one respondent in connection with a high and inefficient tax system.

"High tax rates affect any company very seriously, especially if the company is exporting. I will say it will cripple it. For example we are suppose to have refund of VAT on raw materials, but you know Ghana it is a 'go and come' 'go and come' matter. You will not receive the refund without paying a bribe. This affects our cash flow and cost of production"

de Soto (1989) for example argue that a high and inefficient tax system can destroy an efficient selection process through which better performing firms gain market share and replace it with one dominated by informal firms.

10.3: Informal State Activities

10.3.1: Late Payments

A late payment of bills by debtors was identified as having some perceived effect on growth with an overall mean score of 3.34. Its impact was found to be directly related to the level of growth achieved by the firms and was significant at 5 percent level of significance. While the firms within the highest growth category complained the most with a mean score of 3.59, the decliners had the least mean score of 2.46. The high growth firms in order to sell more of their products may have introduced credit schemes to customers. This can increase the risk of default and subsequently slow down growth. Further evidence suggested that the plastics and rubber, the metal works and the paper and printing sub-sectors were perceived to have been affected most by the effects of late payments. These sectors were also found to face a higher demand constraint.

Van Biesebroeck (2005) notes that to boost demand, firms are forced to introduce credit to their credit-constrained clients. The effect of a high credit policy resulting in an increase in the level of late-payments and eventual default has been previously highlighted in Zimbabwe by Fafchamps (1997). In Kenya, Kimuyu and Omiti (2000) report that more than half of entrepreneurs interviewed perceived the resolution of trade-credit related disputes as difficult.

Our results also showed that small firms were relatively more disadvantaged by the effects of late payments, though their mean score of 3.51 was not substantially different from that of large firms at 3.48. This finding is consistent with an earlier one by Kimuyu (1997), who argues that small firms are disadvantaged with regard to business related disputes.

Bartlett and Bukvić (2001), however, find no significant effect of late payment of bills on firm growth in Slovenia a transitional country.

Late payment is reported to be a problem affecting small businesses in the OECD countries as well (OECD 1998). The report further notes that the constraining effects of late payment is most severe among the smaller firms due to their vulnerability to cash-flow constraints and their weaker bargaining position when dealing with purchasers. It is also reported that the problem is even more common with public sector procurement, which has led to some countries legislating on prompt payment of public sector debts to the private sector as well as levying mandatory interest on delay payments.

In Ghana, Ashong (undated) reports that for the year 2000, included in the national domestic debt was a large amount in respect of payment arrears due to suppliers of goods and services to the government. Ashong (undated) further notes that the size of the unofficial debt was growing rapidly.

10.3.2: Corruption

Our finding regarding the relationship between corruption and firm growth was negative but not significant. The results also showed that the large firms perceived the impact of corruption as highly important factor, while the smaller firms were the least affected by corruption. The paper and printing and the furniture and wood processing sub-sectors were the worst affected by corruption with mean scores of 3.08 and 2.91 respectively. This can be explained by the fact that the paper and printing sub-sector relied heavily on government contract for business. In the case of the furniture and wood processing sub-sector it may be due to heavy regulation of timber resources in the country. It was therefore probable that firms had to pay bribes in order to gain access to raw materials.

Our findings on corruption should be interpreted under the background that it is difficult to collect reliable quantitative data on corruption due to its secretive nature (Reinikka and

Svensson undated, Svensson 2002). To increase the reliability of data face to face interviews were conducted.

According to Fisman and Svensson (2002) growth and corruption are likely to be jointly determined, in that payments relating to corruption will be dependent on a firm's ability to pay. Thus a high amount of corruption is likely to be demanded from firms experiencing higher growth who will be more willing to pay in order to keep whatever advantage such payments may bring to the firm.

There are mainly two schools of thought on how corruption impact on firm growth.

Some researchers argue that through corruption firms are able to get things done and indeed corruption serves as an incentive for public servants who are usually not well remunerated (Bardhan 1997, Fisman and Svensson 2002). Most efficient firms are also considered to be the ones that can afford the highest bribe, which can then lead to an efficient allocation of licenses and government contracts (Fisman and Svensson 2002).

On the other hand, corrupt official can intentionally cause delays so as to extract a lot more money (Kaufmann and Wei 1998). According to Beck et al (2002) corruption when included in an analysis with other constraint factors, tends to be less significant as its impact is captured in the other variables such as financing constraints. They concluded that corruption has a negative impact on growth and is more severe with the smaller firms. Our position is that corruption can disturb the competitive market and will therefore not lead to efficiency, thus is detrimental to firm growth. We therefore advocate for further research to establish the true effect of corruption on small firm growth in Ghana, as we did not find any evidence on the effect of corruption on the manufacturing sector. Moreover, Ghana is consistently ranked among the most corrupt countries in the world by Transparency International. A survey among 1500 households, 500 business enterprises and 1000 public officials in Ghana concludes that about 75 percent of the respondents perceived corruption as a problem in the country (CDD 2000). For the business enterprises, 44 percent indicated

that they make unofficial payments and for 56 percent of the business enterprises service is delivered once they make unofficial payments. Fisman and Svensson (2002) find that in Uganda the relationship between growth and bribery payments is negative and strong. In Kenya corruption is ranked as the fourth most important barrier ahead of high cost of borrowing and was more severe among larger firms than the smaller firms (Söderbom 2001).

10.4: Macro Environment

10.4.1: Access to Credit

The research results indicated that a lack of access to credit was ranked the fifth most important constraint with a mean score of 3.35. It was also observed that the severity of its impact was unequal among our growth categories. While it was most sever among high growers (mean score 3.48), followed by the decliners (mean score 3.40), it had the least impact on firms that achieved stable growth rates (mean score 3.20). It is possible that the high growers received a relatively higher proportion of credit available during the studied period. However as rapidly growing firms are more vulnerable to liquidity problems (Smallbone and Wyer 2000); the lack of credit was of relatively high importance. In the case of decliners, the most plausible explanation can be that the financial institutions discriminated against them due to relatively high perceived risks associated with them.

The differences in the sectors and the size of the firms also resulted in differences in how the owner/managers perceived the impact of lack of credit. For example the plastics and rubber (mean score 3.52) and the food processing (mean score 3.46) sub-sectors were the worst affected, while the metal works (mean score 3.04) was the least sub-sector to have perceived the factor as important. The small firms were the worst affected by the lack of credit.

Lack of access to credit has been noted by many researchers of small firms especially in developing and transitional economies (Trulsson 2002, Brown et al 2003, Aidis 2003,

Kimuyu and Omiti 2000, Ayyagari et al 2003, Van Biesebroeck 2005, Mookerjee 1999, Pissarides 1998, Brinders et al 2003, Söderbom 2001, Eifert and Ramachandran 2004, Tybout 2000). For example Ayyagari et al (2003) using data from the World Business Environment Survey (WBES) which comprises 35 countries, conclude that financing obstacles are negatively and robustly correlated with small firm growth. Pissarides (1998) notes that in Central and Eastern Europe, the weight of the liquidity constraints is so great that the financial system in those economies can be blamed for the disappointing growth of the small firm sector.

In Ghana researchers like Baah-Nuakoh (2003), Ofei (undated), Webster (1996), Andrea (1981), Johnson and Rogaly (1997), Kayanula and Quartey (2002) have concluded that lack of credit is a major factor that impedes growth of firms in the country. Baah-Nuakoh (2003) for example report that access to credit is the most important constraint for all firms in all size, sector and age categories, but is more severe in smaller firms than the larger ones. Baah-Nuakoh (2003) further reports that its effect is more severe in younger firms than the more mature firms. Van Biesebroeck (2005) using data from nine African countries including Ghana arrives at the same conclusion that within all the nine countries lack of access to credit is the single most important issue. The non-availability of credit Van Biesebroeck (2005) argues makes the cost of borrowing high. He further note that the difficulty of obtaining credit does not affect firms equally, and that the smaller firms are the most constrained. The situation in Côte d'Ivoire as reported by Sleuwaegen and Goedhuys (2002) is that lack of credit is ranked second to tax constraints among 185 manufacturing firms. They note further that large firms appear to be the least constrained by the effects of lack of credit. Söderbom (2001) reports similar findings in Kenya, where lack of credit is ranked as second most constraining factor among eight factors including corruption, lack of demand and high interest rate. Söderbom (2001) further notes that

within the smaller firms the factor is the main problem, while no large firm consider it as a major problem.

According to an owner/manager of a large sized firm interviewed access to credit was not a major problem as long as a firm's financial performance was satisfactory to the financial institutions. They were most afraid to take risks.

"You know the banks are like the sharks, they play around you, they play with you then one will bite you and when the blood starts coming then everyone licks the blood. All the banks come to search for you when things are ok. The banks buy and sell money, so they want to find good guys to give them money."

Kimuyu and Omiti (2000) and Mookerjee (1999) are with the opinion that credit imperfections are more pervasive in LDCs because of the less developed intermediary sector. Financial intimidations in LDCs suffer from a thin bond and equity market, pervasive information asymmetries and lack of enforcement of credit contractual obligations. Kimuyu and Omiti (2000) further argue that the credit markets imperfections raise the cost of capital to borrowers, which also does not only transfer substantial incomes from borrowers to lenders but brings about a debt burden on borrowers' and increase the risk of default.

In their study of barriers to growth among firms in Burundi, Goedhuys and Sleuwaegen (1999) report that of 15 growth constraint factors listed, the first and most important obstacle is access to credit.

Aryeetey et al (1994) find that in Ghana the success rate for loan application among the large firms is 70 percent. Thus drops to 50 percent among small firms and further to 33 percent among micro firms.

10.4.2: Cost of Credit

Dinye and Nyaba (2001) point out that the deregulation of interest rate policy in Ghana has promoted competitiveness within the banking system however, interest rates remain high.

High cost of borrowing is cited as an important barrier to growth among smaller firms in Kenya (Söderbom, 2001). Using data from 54 countries comprising both developed and developing countries Beck et al (2002) conclude that the high interest rate is one of the most constraining factors that significantly affect growth of firms in LDCs, with its impact most severe among smaller firms. A high cost of borrowing serves as a disincentive to high growth motivated owner/managers. We quote below two interviewees from our qualitative research.

"You can have a project but because the interest rate is very high you are afraid to take it, because should there be a small problem with the project you are in trouble. Interest rate at 35% p.a. is extremely high."

"Cost of funds is also high. That makes prices high to the consumer because our entire interest element is charged to the consumer."

Our empirical evidence is that cost of credit was the most perceived constraint to growth with an overall mean score of 3.99. The barrier was considered the number one most important constraint by the firms within all the growth categories, though with varying degree of severity. Possibly due to their relatively high perceived credit risk, firms that experienced reduction in their employment base paid more as cost of borrowing. The growers, who might have been perceived to be less risky, were the growth category to cite the factor as least important.

The paper and printing (mean score 4.19) and the food processing (mean score 4.18) were also the worst affected sectors. While that large firms complain the most (mean score (4.10), followed by the small firms (mean score 4.05).

According to Ashong (undated) the cost of borrowing in Ghana during the studied period was a reflection of high national domestic debt. He notes that domestic interest payments accounted for 70.4 percent of total national interest payment which amounted to 6.1 percent of GDP for the 2000 fiscal year, hence the rising trend of local interest rates.

10.4.3: Input Cost

High cost of inputs was perceived as the second most important factor that impacted on growth during the studied period with an overall mean score of 3.57. Its impact on growth was however, not statistically significant. This was how one owner/manager expressed the extent of the constraint on growth.

"The price of imported biscuit sometime ago was almost equal to the price of flour in Ghana, so without adding any other ingredients to our products we were not competitive.

Its impact was perceived to be most severe among the high growers, followed by the stable and the decliners. The growers complained the least. There was no clear relationship between the impact of lack of inputs and firm size. While the smaller firms were the most affected, the medium firms were the least to perceive the factor as important.

Firms that largely relied on imported raw materials such as the plastics and rubber (mean score 3.71), and the paper and printing (mean score 3.65) sub-sectors were the most hit by the perceived impact of the input factor. The firms within the food processing sub-sector which mainly use local agro-based products as their main source of raw materials perceived the factor as the least constraining (mean score 3.39). The metal sub-sector which has a high concentration of aluminum products manufacturers relied heavily on ALWORKS a local aluminum manufacturer for their inputs. In the recent past the growth in the industry has increased demand beyond the capability of ALWORKS. The large firms with financial capability were importing some of their raw material needs. As stated earlier the furniture and wood processing sub-sector faced high government regulation which impacted on its main input (i.e. timber).

Lack of input as constraint to firm growth in Ghana has been reported by other researchers (Kayanula and Quartey 2002, Aryeetey et al 1994, Baah-Nuakoh 2003, Van Biesebroeck 2005). According to Van Biesebroeck (2005) the difficulty of obtaining raw materials, which is ranked as the third most important constraint, in a survey of nine African

countries is mainly due to the scarcity and the cost of foreign exchange. The high input cost and lack of access to inputs which impede small entrepreneurs in Africa are highlighted by other researchers (Sleuwaegen and Goedhuys 2002, Brinders et al 2003, McCormick et al 1997). They argue that manufacturers of raw materials are mostly not interested dealing directly with small firms.

Liedholm (2002) finds evidence in Africa and Latin America that state policies often discriminate against small firms relative to their larger counterparts in areas such as access and prices of inputs. It is argued that while large firms, for example can import their capital equipment without paying duties and tariffs through schemes like investment promotion, the small firms are made to pay same on their capital equipment (Lall 2000, Liedholm 2002).

10.4.4: Competition form Imports

In 1983 the Government of Ghana introduced trade liberalization which was aimed at increasing local competition and opening up export opportunities to the local manufacturing industry. It is argued that, while the import liberalization has made it possible for the domestic manufacturing firms to gain access to the otherwise scarce imported raw materials and equipment, it has increased competition from imported products (Dinye and Nyaba 2001). The following is how one of the qualitative interview respondents expressed the effect of the trade liberalization policy.

"The trade liberalization policy is a problem. The large imports of goods into the country at very cheap prices affect the growth of the industry in Ghana. It is preventing local manufacturers from expanding their business."

While the constraining effect of imported products was perceived and ranked the eighth (mean score 2.99) most important barrier to growth, its impact had a varying degree depending on firm size, sector and growth level. For example the small firms cited the

factor as most constraining (mean score of 3.09). Followed by the large sized firms (mean score 2.95), and then the medium sized firms (mean score 2.89). Its impact was highest among the high growth firms (mean score 3.67) and the least within the stable growth firms (mean score 2.90). Finally, it was the plastics and rubber (mean score 3.76), food processing (mean score 3.32) and the metal works (mean score 3.24) sub-sectors that appeared to have suffered the most in that order. The least affected sub-sector was the furniture and wood processing (mean score 1.95). In Ghana, Dinye and Nyaba (2001) report that the medium sized firms are the worst affected firm size group by the effect of high imports.

For firms in Burundi, market conditions relating to insufficient demand, and competition from local competitors and imports, appear to be the most important constraint except for lack of credit (Goedhuys and Sleuwaegen, 1999). They argue that while a low purchasing power is generally considered as an obstacle to firm development, smaller firms are affected the most as they often serve the lowest segment of the market. The older firms complain significantly less about market condition for the reason that they may be well established in the local market. They also report that market constraints are sector related and that firms within the metal sub-sector are among the worst affected.

We observed during the exploratory stage of this study that culturally Ghanaians prefer imported products to the locally manufactured ones, sometimes not based on either price and or quality. We provide below an experience from one respondent.

"Because of the Ghanaian mentality that any thing foreign is superior, people tend to pay more for imported products, quality notwithstanding.

I made two samples; on one I labelled made in Ghana and the other just the inscription "fine product". No one knows I make the "fine image" do you mean fine image or fine product right here in Ghana.

The customers see the two products and prefer the "fine product" because they believe it is imported. Except for few companies who insist on buying made in Ghana products many insist on buying imported products."

(Note: "fine product" is not the real brand name).

10.4.5: High Rate of Inflation

According to Kyereme (2004) inflation tends to lower real income, discourages savings, and makes productive inputs more expensive. Inflation could also act as a disincentive to hard work thereby slowing down firm growth. Eifert et al (2005) also note that African firms are less competitive as they face relatively high input cost such as high wages arising from high inflationary pressures. On the other hand, African workers face relatively low purchasing power as the real value of their incomes continues to be eroded by high rates of inflation.

The effect of inflation on growth was ranked the eleventh most important barrier to growth with a mean score of 2.78. Like many of the barriers, the effect of inflation was perceived to be uneven having regard to firm size, growth level and sector. Its impact tended to be highest among the high growth (mean score 3.04), metal works (mean score 3.24) and small sized firms (mean score 3.15). It was least important to the firms which were in the growers category (mean score 2.66), involved in furniture and wood processing (mean score 2.23) and the large sized firm group (mean score 2.29).

10.5: Micro Environment

10.5.1: Competition from Informal Businesses

Our initial position was that the activities of informal firms will constitute a barrier to the growth of firms within the formal system. This followed our prior argument that informal businesses do enjoy unfair competitive advantage arising from less regulatory compliance.

Additionally, we held the view that sectors such as the furniture and wood processing and metal works would suffer the most from the competition posed by the informal sector. Our main argument was that these sub-sectors were relatively less capital intensive, thereby easing some of the entry and exit barriers.

Our data indicated that the factor was perceived to be a somewhat important barrier to growth with an overall mean score of 2.84. It was ranked as the tenth most important barrier by the respondents. Its impact was perceived to be most constraining among the firms engaged in paper and printing (mean score 3.38) and the metal works (mean score 3.12). Plastics and rubber sub-sector was the least affected by the impact of informal competition. This may be due to the relatively high capital intensive requirement. Again, the sub-sector relied on foreign raw materials which were normally imported in large orders by the operators in the industry thus requiring a large amount of working capital.

The impacts of informal sector on growth of the formal sector firms have been found to be strong and robust by some LDCs firm growth researchers (de Soto1989, Tybout 2000).

10.5.2: Inefficient Technology

Rankin et al (2002) note that the Ghanaian manufacturing firms lack the resources to acquire productive technology. Hence most firms continue to rely on obsolete machinery that limits their expansion capabilities and reduces productivity. These firms are said to lack the ability to offer a wide range of goods and improved quality. They also report that technically efficient firms are more likely to export.

The findings of this research were that lack of efficient technology was ranked as the twelfth most important growth barrier with an overall mean score of 2.66. The severity of the barrier was highest among firms that experienced decline in employment growth. It was also most severe among firms engaged in furniture and wood processing and the medium sized firms. The least affected were the firms categorized as growth, firms in the

metal works and large sized firms. The Ghanaian owner/managers cited this factor as a more important barrier than their foreign counterparts. For example 22 (26 percent) out of the 89 Ghanaian owned/managed firms considered lack of efficient technology as either a "very important" or an "extremely important" factor, whiles for the foreign owned/managed firms 5 (15 percent) out of 33 cited the factor as either a "very important" or an "extremely important". The low technological advancement of firms in LDCs can be attributed to the high focus on the domestic market. The domestic market is seen as less sophisticated as observed by one respondent.

"The machines we have are obsolete, but to the Ghanaian standard I will say it is ok"

Furthermore as argued by Harding et al (2002) investments in LDCs often take a longer period to recover due to the small nature of the markets in these countries. They also note that African manufacturing firms suffer from higher investments in technology due to lack of access to financing. African manufacturing firms also prefer to finance investments using their own limited resources, rather than using external investment financing.

According to Bhaumik et al (2004), African manufacturing firms benefit less from technological transfer from the developed countries. This is because foreign firms enter the LDCs markets either to produce unsophisticated products or target these markets to supply products that have reached their prime life cycle. Thus it is not uncommon for foreign firms to transfer older technologies into these countries.

10.5.3: Lack of Trust

Frances (2004) suggests that entrepreneurs reduce losses by dealing with people they trust. He notes that trust is based on social relations. The kind of business relationships and activities that are undertaken are affected by the nature of social relations among parties (Granovetter 1985, Frances 2004). Given the institutional weaknesses in most LDCs we

were with the opinion that owner/managers of small firms will put a high premium on trust. We observed from the initial exploratory research that for some of the small firms, growth was limited because of general lack of trust among the business community.

Our empirical evidence was that lack of trust and honesty was ranked the third most important barrier to growth (mean score 3.46) ahead of other barriers such as lack of access to credit, high bureaucracy and late payments. The factor was most sever among the medium sized firms and least important among the small firms.

10.6: MANOVA on Growth Categories

MANOVA was performed aimed at ascertaining whether there were significant differences or not in respect of how the firms in the various growth categories perceived the constraint variables. The results of the test as provided in Table 10.2 below indicate that there were significant differences as to how the firms in the various growth groups perceived the impact of the constraint variables on growth.

Table 10.2: MANOVA- Growth Categories

Multivariate Tests		
	F-ratio	Sig.
Pillai's Trace	1.547	.009
Wilks' Lambda	1.535	.010
Hotelling's Trace	1.521	.012
Roy's Largest Root	2.093	.008

P=0.05

Further to the above results ANOVA was performed aimed at identifying those constraint variables that were significantly and differently perceived by the various growth groups. In Table 10.3 below the result of the ANOVA is reported.

Table 10.3: ANOVA on Growth Categories

			Impact on Growth Categories			
Constraint	**F-Ratio**	**Sig.**	**High Growers**	**Growers**	**Stable**	**Decliners**
Corruption	2.947	.036	Low	Medium	High	High
Imports	2.882	.039	High	Medium	Low	High
Demand	5.771	.001	High	Low	High	Medium
Tax	2.874	.039	High	Low	High	Medium
Interest Cost	5.979	.001	High	Low	Medium	High
Inflation	4.207	.007	High	Medium	High	Low

P=0.05

The above ANOVA analysis indicates that the perception of constraints on growth was highest among the high growers and the least among the growers. In Appendix 10.1 we present a summary of constraints ranked based on their mean scores, together with our comments.

10.7: Conclusion

In this chapter we have discussed some of the constraints that impeded growth of the small firms during the studied period. Our main findings were that cost of borrowing, lack of access to credit, high cost of inputs, a lack of trust within the business community, high bureaucracy, late payments and lack of efficient support system are some of the barriers that constrained growth. The severity of the barriers differed among sectors, firm size and growth levels.

Chapter Eleven

Conclusions and Implications

11.1: Introduction

As stated in chapter one the main objective of this dissertation was to find the major factors that lead to growth of small firms within the context of LDCs. The research was therefore aimed at answering a prime question being: What are the significant factors that influence growth of small firms in LDCs? Based on existing theories, factors were categorised into four main groups (i.e. Owner/manager characteristics, firm characteristics, business strategy and constraints). Following this classification four sub-research questions were asked (restated below), in order to answer the main research question.

- Which characteristics of the owner/manager have significant influences on small firm growth in LDCs?
- What are the major characteristics of the firm that impact on small firm growth in LDCs?
- What kind of business strategies adopted has a significant influence on small firm growth in LDCs?
- What are the major factors that constraint growth of small firms in LDCs?

To answer the above questions a two stage approach to the research was adopted. First, qualitative interviews were conducted which involved fifteen small firm owner/managers. The main objective of the qualitative research was to ascertain the owner/managers' perception of factors that led to the growth of the small firms during the studied period, and the constraints that the small firms faced in their quest for growth. The exploratory research assisted in the development of our research hypotheses. It also increased our understanding of how small firms grow in Ghana, thus enriching the explanations made to the empirical results. The second stage involved a survey of 204 small firms of which 122 responded, giving a response rate of 60 percent.

In this chapter a summary of the most important findings are presented, together with implications for small firms' practitioners and policy makers based on the findings. Lastly, the limitations to the research and recommendations for future study are discussed.

11.2: Summary of Findings

A number of variables were developed out of which 23 offered either statistically significant explanations or because of their theoretical underpinning were included in our final regression equation (see Table 6.2). The 23 variables together provided about 68 percent explanation for small firm growth within our data set.

11.2.1: Owner/Manager Characteristics

The role played by the owner/manager in influencing small firm growth became prominent in our model. This was in agreement with the widely held view that in small firms the owner/managers hold the key to growth, as the choice to grow the business or not is theirs (Andersson 2003, Wiklund 1998, Storey 1994, Barkham 1996, Bridge et al 2003). In particular the owner/manager's growth aspiration was the most influential factor in achieving growth, even if it was not a sufficient condition for growth to occur. The factor contributed about 38 percent to the growth explanatory power when the effects of the other variables were held constant. It was further observed that the characteristics of the owner/managers with higher growth aspirations differed significantly from their other counterparts. For instance the higher growth oriented owner/managers had higher levels of human capital in the form of experience and education. Such owner/managers tended to be younger and did not spread their resources thinly by engaging in numerous activities.

While growth oriented owner/managers could be found in any sector, firm age or size group, it became evident on the other hand that growth oriented owner/managers had a higher export, process innovation and planning orientations. Finally, the growth oriented

and the non-growth oriented owner/managers had a similar perception of constraints to growth.

The other owner/manager characteristics variables that were found to be important in our determination of growth factors are stated below:

Prior Industry Experience: the factor had a positive and significant relationship with growth. This implied that firms owned/managed by people with prior industry experience were likely to grow faster.

Prior Local Experience: we found that growth was significantly and negatively influenced by the fact that the owner/manager had prior local experience.

Nationality: firms owned/managed by immigrants were more likely to show a higher growth rate than that of the local owner/managers. It was observed that the immigrant owner/managers had higher levels of education and industry experience and a high level of concentration in the plastics and rubber and the wood sectors. Additionally the immigrant owner/managers had a higher propensity to adopt high growth oriented business strategies such exporting, innovation and planning.

11.2.2: Firm Characteristics

The firm characteristics variables that were included in the model were size, sector, age and number of owners. Firm size and sector were the firm characteristic variables that had significant impacts on growth. It was observed that firm size had a negative impact on growth, in other words the smaller a firm was the higher its growth rate. Owner/managers characteristics such as growth aspiration and nationality were found to be significantly different among the various firm size groups.

Differences in sectors resulted in the firms achieving different growth rates. The highest growing sub-sector was metal works, followed by furniture and wood, paper and printing and food processing sub-sectors respectively. The least growing sub-sector was the plastics

and rubber. The owner/manager characteristics that were found to be significantly different among the sub-sectors were education and nationality (see section 8.1). Firms within different sub-sectors were found to be pursuing significantly different growth strategies. For example while firms engaged in furniture and wood processing and plastics and rubber had a higher export orientation, firms within the food processing and paper and printing sub-sectors had a low attitude towards export. Finally, the external environment had a varied impact on the various sub-sectors (see section 8.1).

11.2.3: Business Strategy

We examined a number of business strategies that the small firms used during the studied period to achieve growth. Business planning, marketing and exporting were found to be statistically significant in influencing growth of these small firms. Firms that were either engaged in planning or exporting, as well those with higher marketing activities were observed to have a higher likelihood of growing faster than their other counterparts.

We observed that some of the owner/manager and firm characteristics variables interacted significantly with the business strategy variables to affect growth. For example owner/managers with a higher level of education were more likely to be market and export oriented. They were found to be more innovative and had a higher likelihood of engaging in business planning.

The smaller firms were found to be less likely to engage in growth oriented business strategies, such as export, marketing, staff development and formal planning.

11.2.4: Constraints

We included twenty one constraining factors in the survey of which two had significant constraining effect on growth (i.e. informal competition and late payments). Our view was that, the fact that many of the barriers to growth variables did not offer statistically

significant explanation to the growth model based on the regression analysis did not mean that they had not impeded growth during the studied period. The plausible explanation could be that their perceived effects were widely spread in such a manner that they failed to significantly account for the differences in growth rates.

In our grouping of the constraint variables (see figure 10.1) we observed that many of the highly constraining barriers related to the macro environment (e.g. high borrowing cost, high input cost, lack of credit, competition from imports and high rate of inflation). The overall perceived constraining effects of the macro environment barriers were the most sever. This was followed by formal state activities barriers (e.g. high bureaucracy, lack of efficient support and high and inefficient tax system). The informal state activities barriers (e.g. corruption) were perceived to have had the least impact on growth.

While the five highest ranked perceived constraints were cost of borrowing, high cost of inputs, lack of trust and honesty, high bureaucracy and lack of credit, the least five perceived barriers were political persecution, property right, contract enforcement, inefficient legal system and lack of transparency (see Table 6.9).

We observed differences in the severity of the perceived constraints having regard to sectoral differences. Firms within the plastics and rubber sub-sector appeared to have suffered the most, followed by firms in paper and printing, food processing and metal works in that order. The least to cite the factors as having restricted growth were those firms in furniture and wood processing.

Finally, no clear pattern emerged between firm size and the severity of the constraining factors. For example, while the large firms complained the most about the effects of the barriers to growth, the constraining effects were higher among the small firms than the medium firms.

Table 11.1 presents the summary of the significant findings of this study in comparison with previous findings.

Table 11.1: Summary of Significant Research Findings

	Our Findings	Existing Findings LDCs	Existing Findings DCs	Implications/Recommendations
(1) Growth Aspiration's relationship with Growth.	Positive	Positive	Positive	Growth is a choice to be made by the owner/manager first before pursuing certain business strategies to realize the dreamed growth. Firms with growth potential can be segregated from those without it for policy development and implementation.
(2) Relationship between prior industry experience and growth.	Positive	Mixed	Mixed	Entrepreneurs should choice to enter industries in which they have good knowledge and understanding.
(3) Relationship between local experience and growth.	Negative	Mixed	Positive	Local entrepreneurs should form partnerships with foreign ones and also adopt some international best business practices.
(4) Immigrants' firms grow faster.	Confirmed	Confirmed	Mixed	Local entrepreneurs should form partnerships with foreign ones.
(5) Growth rates differ among sectors.	Confirmed	Mixed	Mixed	Different policies can be developed based on sectoral differences.
(6) Relationship between export and growth.	Positive	Mixed	Mixed	Export can be used to build long-term competitiveness and reduce the low demand within LDCs.
(7) Relationship between business planning and growth.	Positive	Mixed	Mixed	Planning tends to reduce the negative impact of the external environment.
(8) Relationship between marketing and growth.	Positive	Mixed	Mixed	Firms that face high level of import and informal competition need to resort to high marketing to increase sales.

11.3: Theoretical Contribution

11.3.1 Small Firm Growth Modeling in LDCs

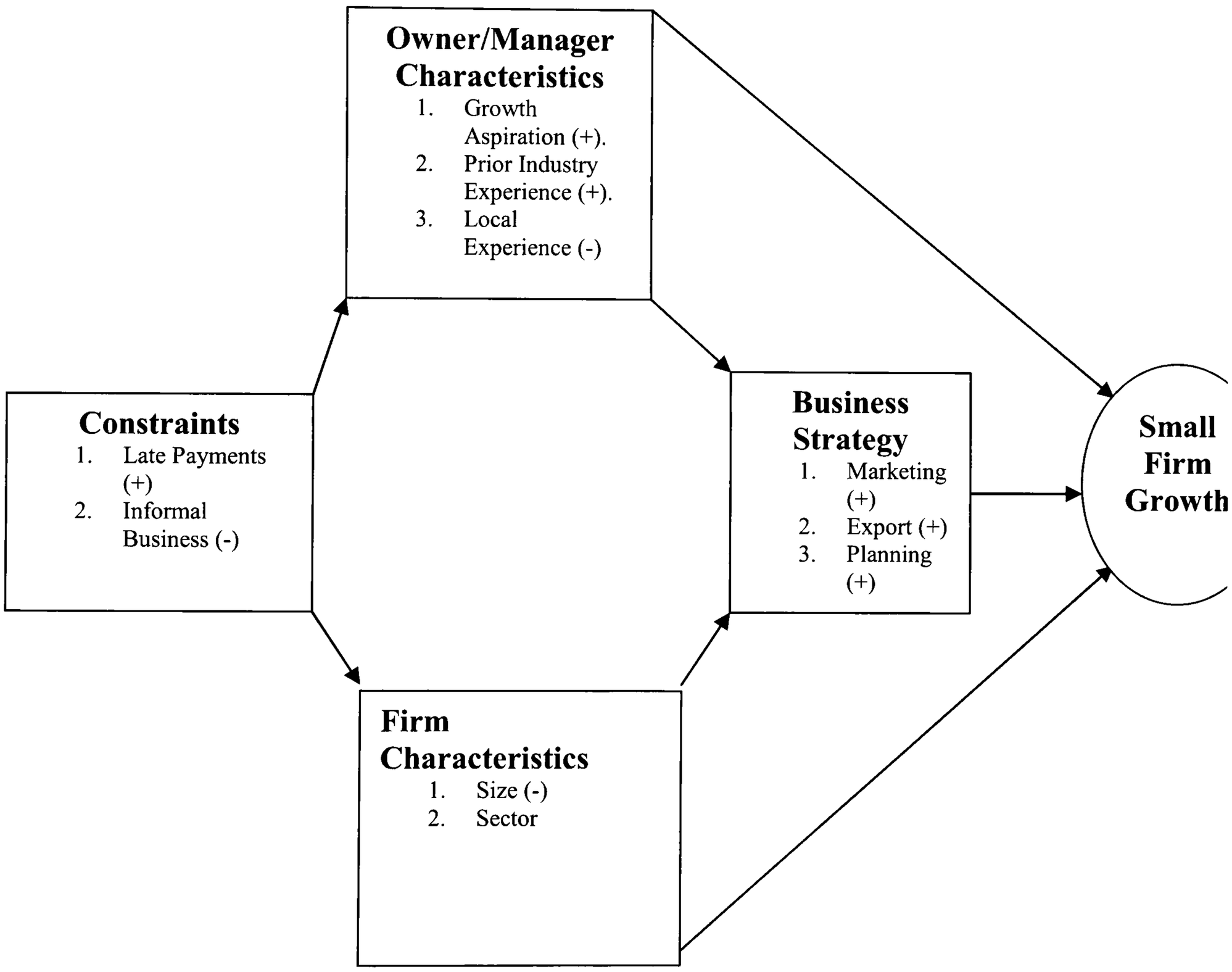
The study of small firm growth in developed countries has largely been based on a combination of theoretical constructs such as strategy; resources, motivation and environment (see Table 2.2 for more examples of growth models). However in LDCs researchers have largely concentrated their studies on a single construct either based on the external environment or the organizational level (see Table 1.2). This research which is based on an LDC environment used a growth model that combined factors relating to the owner/manager, the firm, strategy and the external environment variables to study small firm growth. The results of the study support the existing theory that small firm growth is a

complex phenomenon, which requires a combination of factors even within the LDC context.

The results as shown in our revised small firm growth model (Figure 11.1 below) suggest that many of the external environment variables have less significant and direct impacts on growth.

Figure 11.1

Small Firm Growth Model in LDCs



This is in contrary to existing theory that small firms are limited by resources to effect changes in the external environment which leads to a direct impact on their growth rates (Gilad and Levine 1986, Robertson 1996, Schindehutte and Morris 2001, Bridge et al 2003).

This finding also suggests that growth studies that are typically based on perception of constraint factors cannot provide an adequate explanation of small firm growth phenomenon in LDCs context.

The high significant role played by the owner/manager in the explanation of small firm growth (Story 1994, Bridge et al 2003, Barkham et al 1996, Wiklund 1998, Stokes 2000, Wilklund et al 2003, Smallbone and Wyer 2003, Holmes and Gibson 2001, Andersson 2003, Orser et al 2000) was given further support and insight by this research. While the owner/manager growth aspiration is found to be the single most important variable that determines small firm growth in the developed countries, this research supporting this position also found that prior industry experience has a significant impact on growth. Mixed results of the effect of prior industry experience on growth have been reported in the developed countries. It was also observed that in LDCs like the transitional economies small firm growth is negatively affected by managerial experience. What this research adds to the existing body of small firm growth theories is that local knowledge in LDCs environment which often is less market orientated should be complimented with knowledge and skills from the outside world to achieve growth. It is equally important to point out that foreign experience alone is not sufficient to achieve growth within the LDCs context, due to cultural, regulation and economic environment differences.

There are mixed findings as to how differences in sectors affect growth in both LDCs and DCs (see Appendix 8.2). Our finding supports the view that there are significant growth differences across sectors. While within the DCs context differences in sectoral growth, theoretically is due to the product life circle model (Bridge et al 2003), in LDCs context the uneven distribution of resources, discrimination in the application of regulation and differences in economic factors impacting on different sectors are the main causes of growth differential across sectors.

It was observed that business planning, marketing and exporting activities are the significant business strategy variables that led to growth among the sampled small firms.

It was also observed that the various explanatory factors interact to affect growth. The direct link between growth and constraint variables was established to be weak, however evidence was established that the impact of the constraining variables were significantly dependent on the owner/manager, firm and business strategy variables.

11.4: Managerial Implications

The study discussed among others the importance of the owner/manager in the growth of small firms. While there is no doubt that growth is a choice to be made by the owner/manager, it is commonly also agreed that commitment to growth alone will not result in real growth. The managerial implication is that small firm owner manager's decisions and actions are significant in achieving higher growth. In practice therefore owner/managers of small firms within LDCs context should be guided by the fact that growth is not an entire deterministic factor outside their control. To achieve growth, first the firm has to make growth as an important objective (Barringer et al 2005) and pursue certain growth oriented strategies; significant of these are exporting, marketing and business planning.

The result is a clear demonstration that relevant prior industry experience of the owner/manager plays a key role in achieving growth. In practice therefore owner/managers should employ managers with relevant industry experience and possibly those without experience rather than those with experience acquired from dissimilar environment. Another practical importance of this finding is that entrepreneurs should choice to establish firms within industries that they have relevant experience and knowledge.

The study also presents another practical managerial implication for local managers to the effect that locally acquired experience has a negative relationship with growth. In practice therefore local managers should learn and adopt workable practices used by their foreign counterparts. It is recommended that Ghanaian and other LDCs entrepreneurs should form partnerships with their foreign counterparts to gain from experiences of the later. This according to the results of this study can lead to higher growth.

Like in most sub-Sahara African countries, manufacturing firms in Ghana remain largely focused on the domestic market which is limited in demand and face increasing import penetration. Firms can boost their growth rates by looking at the external market as export was found to be significantly and positively associated with growth by this study. To be a successful exporter requires having bigger production capacities. Firms that are yet to enter the export market can adopt the learning model which advocates for gradual entry. There is the need for firms to increase their skills and acquire export information to enhance export activities and reduce risks associated with export.

The finding that the impact of the external environment on growth is highly dependent on the owner/manager characteristics, the firm characteristics and the business strategy adopted has a major practical implication for small firm owner/managers. While an individual small firm cannot effect changes in the environment, in practice it can adopt strategies that are conducive to growth within certain constraining environment. For example planning was found to be associated with lower impact of higher inputs cost, lack of credit, informal competition and lack of efficient technology. Again firms that export were found to be able to reduce the constraining effects of lack of credit, informal competition and high inflation on growth. In practice therefore, firms need to adopt effective business strategies to reduce the impact of constraints on growth.

11.5: Policy Implications

There are currently many governmental and non-governmental institutions assisting small firms aimed at solving unemployment situations and also to increase competitive business position in many LDCs. Though this study was not directed towards the assessment of the effectiveness of programmes and policies of these institutions, its findings can lead us to make some recommendations to affect policy guidelines.

The first policy implication of this study relates to the ability to predict small firms which are likely to grow and those which are not, within LDCs context. This is likely to increase the effectiveness of institutional assistance towards the development of the small firm sector. Policies can either be directed towards firms that are likely to grow or focus placed on those that require assistance to grow.

In a situation where a policy guideline is towards assisting firms with high growth potentials the results of this study then suggest that small firm growth is significantly and positively affected by the characteristics of the owner/manager. Any policy towards strengthening of small firm growth within LDCs environment should consider influencing the characteristics of the owner/managers in particular to be growth oriented.

Growth rates are significantly affected by the sector within which a firm operates. Strategy to identify firms with and without growth potentials based on sectoral differences is given further boost. This calls for the development of different policies aimed at assisting firms to grow for different industries.

The significantly found negative impact of local experience on small firm growth requires a policy aimed at building local capacity within competitive market structures in LDCs. A policy towards infusion of foreign experiences and practices that are workable within LDCs environment is recommended.

The findings of this research suggest that some recommendations can be made in the design and implementation of policies towards assisting different groups of small firms in

achieving growth. Presently, a lot of emphasis is placed on finding ways that resources such as capital can easily be made available to small firms aimed at increasing their growth potentials. The results of this research however, did not suggest that lack of access to or lower cost of capital significantly impede growth. Thus, policies should rather be more focused on the development of marketing, exporting and business planning strategies to enhance the competitiveness of small firms in LDCs.

11.6: Limitations

The study is limited as the sample taken did not include certain industries and size brackets; hence statistical inference to the total population of small firms in Ghana is limited.

The study was based on cross-sectional data, while growth in itself is a process. Causal links among the variables can therefore not be clearly established. The model developed suffers from this limitation. However, our hypotheses were developed based on the results of the initial exploratory research, existing theories and empirical research, hence having positive effects on the validity of the results. In this regard longitudinal data may be required to control differences in time and its effects on the research results.

The results were based on the perception of a single member of the firms; undoubtedly data collected from multiple sources could have enhanced reliability and validity. In view of this limitation efforts were made to interview the owner/managers themselves who are considered as the nerve centre of small firms. We achieved 100 percent coverage in this respect.

As argued by Wiklund (1998) in a survey design where data is self-reported by the respondents there is the need to distinguish between objective measures (e.g. size) and self-perceived variables (e.g. constraints). This research can be limited by the assumption that self-reported variables can be used to predict objective outcomes (growth) suggesting that

self-reported measures can have reflection on objective circumstances. The self-reported measures could have been validated by contacting more than one respondent within each firm. This was not carried out due to its cost implications and the strong potential to reduce response rate.

Growth was measured in terms of number of employees. However, the possibility exists that growth in terms of number of employees could have resulted from sales growth. If this was the case then growth in sales would have been a better measurement of the attitude of the owner/managers towards growth than number of employees used.

Another limitation of this study is the inclusion of part-time employees on the same bases as full-time employees. In situations where for example the part-time employees worked less hours or not engaged throughout the year can affect our growth measure as well as the owner/manager's growth aspiration.

We analyzed a single firm of the owner/managers; this may be unfair in situations where an owner/manager has other growing business interest apart from the one analyzed.

11.7: Future Research

The study confirms the view that small firm growth is a complex phenomenon, hence more research that combine multiple of factors to arrive at a better understanding of what leads to growth of these firms is advocated. To the best of our knowledge earlier researchers in Ghana have concentrated their efforts on finding factors that constrain the growth of firms in the country. The replications of this research in the manufacturing sector by the inclusion of more sub-sectors, and in different sectors are advocated.

We echo the call by McPherson (1996) for improved data collection methods, in particular those permitting the collection of accurate data on flow variables such as sales, prices and costs, thus to provide better understanding of the hitherto complex growth phenomenon.

The main objective of this study was to identify factors that lead to growth; however, growth in itself comes with many adverse consequences that may serve as threats to its sustainability. A research identifying information on the potential pitfalls and advantages associated with the pursuit of growth oriented strategies is recommended.

11.8: Conclusion

In the recent decades, there has been universal recognition of the contribution of small firms to the economic development of nations both developed and developing. Small firms have been cited for their significant contributions not only to job creation and social and political stability, but also to innovative and competitive power (Wennekers and Thurik, 1999). However, it is argued that only a few small businesses do grow and account for the majority of small firms' employment contributions.

The main research objective was therefore to ascertain the key factors that lead to growth of small firms in LDCs. Small firm growth had been extensively studied in the developed nations. However, in LDCs there remain little knowledge and information about this subject matter. Again theories relating to the developed world are not entirely applicable to LDCs due to economic, social, political and cultural differences.

To achieve the set objective one main research question and four other sub-research questions were asked. Appropriate research hypotheses and model were developed through a review of existing theories on small firm growth and an exploratory research involving fifteen small firm owner/managers. To allow for a greater generalization of the research results a survey involving small firm owner/managers in the manufacturing sector was conducted. The survey results were analyzed mainly by using multivariate statistical analysis method.

The results obtained allowed for the testing of the hypotheses and revised model of small firm growth in LDCs. The research questions were adequately answered and the objective

achieved. It was observed that factors relating to the owner/manager characteristics, firm characteristics, business strategy and the external environment interact to affect growth. Out of the various growth variables studied the owner/manager characteristics provided the most powerful explanation for growth. It was observed that growth aspiration and prior industry experience have significant and positive impact on growth, while local experience has significant but negative influence on growth. These observations answered our first sub-research question (i.e. which characteristics of the owner/manager have significant influences on small firm growth in LDCs?).

In the case of the second sub-research question (i.e. what are the major characteristics of the firm that impact on growth?), our results indicated that size and sector are the significant indicators. Whiles firm size was negatively related with growth, it was also found that growth variations were accounted for by differences in sectors.

Marketing, exporting and business planning were identified as the significant and positive business strategy variables impacting on growth, which answered our third sub-research question (i.e. what kind of business strategies adopted has a significant influence on growth?).

While informal business and late payments were identified as the only constraint variables having significant impact on growth, it was also found that the impact of the external environment on growth is significantly dependent on the owner/manager's characteristics and the business strategy adopted as well as the characteristics of the firm.

Theoretical contributions, managerial and policy implications arising from the research have been discussed, as well as the weaknesses that are likely to affect the results. Suggestions for further research have also been made.

The End

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APPENDICES

Appendix 1.1a: Comparison of Key Figures

	Ghana 2002	Sub-Saharan Africa (Avg.) 2002	Low Income Countries World (Avg.) 2002	High Income Countries World (Avg.) 2002
Land Area (000'Km Sq.)	239	24, 267	33,612	32,397
Population (millions)	20	689	2,495	966
Labor Force (millions)	9.7	305.1	1,138.6	470.6
GDP Growth (%)	4.5	2.6	4.3	2.5
GDP per capita(US$)	270	450	430	26,490
Agriculture Annual Growth (%)(1990-2002)	3.5	2.8	2.7	1.2
Manufacturing Annual Growth (%)(1990-2002)	-1.4	1.9	5.7	2.3
Service Annual Growth (%)(1990-2002)	5.4	2.8	5.4	3.0
Agriculture as a percentage of GDP	34	18	24	2
Manufacturing as a percentage of GDP	9	15	17	19
Service as a percentage of GDP	42	54	46	71
Manufacturing Value Added (2000) ($millions)	449	37,493	149,818	4,573,059
Export Value Avg. Annual % Growth (1990-2001)	10.6			
Import Value Avg. Annual % Growth (1990-2001)	9.0			
Domestic Credit to Private Sector as % of GDP	12.0	53.5	26.5	133.1
Domestic Credit provided by Banking Sector as % of GDP	31.9	65.5	48.6	168.5
Time to Start Business (No. Days)	84	72	74	30

Source: Compiled from the World Development Indicators (2004), the World Bank.

Appendix 1.1b: Comparison of Key Figures

	Botswana	Burundi	Cote d'Ivoire	Kenya	Nigeria	South Africa	Tanzania

Land Area (000'Km Sq.)	582	28	322	580	924	1,221	945
Population (millions)	2	7	17	31	133	45	35
GDP Growth (%)	3.1	3.6	-1.8	1.0	-.09	3.0	6.3
GDP per capita(US$)	3,010	100	620	360	300	2,500	290
Agriculture Annual Growth (%)(1990-2002)	-1.2	-.07	3.4	1.2	3.5	1.2	3.4
Manufacturing Annual Growth (%)(1990-2002)	4.0	-8.0	3.4	1.8	1.2	1.6	3.3
Service Annual Growth (%)(1990-2002)	7.2	-1.0	2.0	2.9	2.8	2.8	3.3
Agriculture as a percentage of GDP	2	49	26	16	37	4	44
Manufacturing as a percentage of GDP	4	n/a	13	13	4	19	8
Service as a percentage of GDP	50	31	53	65	34	64	39
Manufacturing Value Added (2000) ($millions)	253	281	1,591	1,163	1,635	21,643	624
Export Value Avg. Annual % Growth (1990-2001)	8.5	-5.6	5.0	5.6	3.7	2.3	7.1
Import Value Avg. Annual % Growth (1990-2001)	1.7	-6.3	3.6	5.6	3.5	5.0	0.7
Domestic Credit to	18.4	26.1	14.8	23.4	17.8	131.7	6.3

Private Sector as % of GDP							
Domestic Credit provided by Banking Sector as % of GDP	-29.6	35.1	20.7	43.2	25.3	150.9	10.0
Time to Start Business (No. Days)	152	17	77	61	44	38	35

Source: Compiled from the World Development Indicators (2004), the World Bank.

Appendix 1.2: National Key Political Events from 1957 to 2004

Period	**Type of Government**	**Name of Party/ Military Group**	**Head of State**	**Comments**
1957-1961	Constitutional Multi-Party	Convention Peoples Party (CPP)	Dr. Kwame Nkrumah	Middle income country with per capita income of US$300. 500million UK pounds in reserves. Embarked on heavy industrialization programme.
1961-1966	Constitutional Single-Party	Convention Peoples Party (CPP)	Dr. Kwame Nkrumah	The regime suffered from a major drop in the price of cocoa from US$467/ton to US$91/ton.
1966-1967	Military	National Liberation Movement	Lt. Gen. J. A. Ankra	Devalued the cedi from US$1.00=¢0.71 to US$1.00=¢1.02
1967-1969	Military	National Liberation Movement	Gen. A. A. Afrifa	
1969-1972	Constitutional Multi-Party	Progress Party (PP)	Dr. A. Busia	A drop in the price of cocoa from US$517/ton to US$289/ton in 1971. Devaluation of the cedi sparked urban unrest.

1972-1975	Military	National Redemption Council (NRC)	Gen. I.K. Acheampong	Revaluation of the cedi. Imposition of import controls. Expropriation of private assets. Perceived high level of corruption.
1975-1978	Military	Supreme Military Council (SMC1)	Gen. I.K. Acheampong	No efforts made to curtail high level of corruption. Continued with bad policies of the NRC regime.

Appendix 1.2 Continued: National Key Political Events from 1957 to 2004

Period	Type of Government	Name of Party/ Military Group	Head of State	Comments
1978-1979	Military	Supreme Military Council (SMC2)	Gen. F. K. Akuffo	Devalued the cedi by 60%. Released political detainees. Planned to handover to elected government. Survives 1st coup attempt by Rawlings.
1979-1979	Military	Armed Forces Revolution Council (AFRC)	Ft. Lt. J.J. Rawlings	Regime lasted for 3 months. Handed over power to an elected government. Executed 3 former heads of state.
1979-1981	Constitutional Multi-Party	Peoples National Party (PNP)	Dr. Hilla Liman	Increased taxes and reduced government expenditure. Refused to accept IMF policies.
1981-1992	Military	Provisional National Defense Council	Ft. Lt. J. Rawlings	Two phases. **1st phase**: socialist inclined. Seizure of private assets to the state. Unilateral cancellation of national debts.

		(PNDC)		Economic decay continued. **2nd phase**: Accepted IMF/World Bank policies. Introduced structural adjustment programme. Market economic policies implemented. Privatization of state enterprises. Decline in inflation rate.
1992-2000	Constitutional Multi-Party	National Democratic Congress	Ft. Lt. J. J. Rawlings	Won two general elections. Continued with market reforms. Lost control over government expenditure, fueling inflation and currency depreciation. Increasing national debts and high interest rates. Low response to private sector reforms.
2000-2004	Constitutional Multi-Party	New Patriotic Party (NPP)	Mr. J. A. Kufour.	Accepted High Indebted Poor Countries initiative by the IMF/World Bank for debt relief. Reduced rate of inflation, currency depreciation and interest rates. Public institutions continued to be weak. High perception of corruption.

Appendix 1.3: Ghana Macroeconomic Indicators 1957-1966

Indicator	**1957**	**1958**	**1959**	**1960**	**1961**	**1962**	**1963**	**1964**	**1965**	**1966**
GDP Growth Rate (%)	-1.0	-4.7	10.0	3.4	1.1	2.4	1.0	-0.2	-2.4	-2.1
Trade Balance (¢'m)	-	-	-	-10	-72	13	-41	0	-163	-55
Current Account (¢'m)				-129	-203	-109	-177	-130	-310	-173
Gross Reserves ($'m)	273	281	304	294	163	197	219	136	118	113
Net Reserves ($'m)	269	277	295	259	159	180	187	89	-10	-391
Inflation (%)	1.0	0.0	2.9	0.9	6.2	5.9	5.6	15.8	22.7	14.8
Govt. Budget Bal (¢'m)	14.6	9.8	-16.1	-49.4	-58.9	-94.8	-96.3	-75.9	-77.6	-375.0
Savings/GNP(¢'m)	12.4	18.0	16.1	15.2	12.7	14.2	13.6	14.6	8.6	8.0

Source: Aryeetey and Fosu (2002) pp 17.

Appendix 1.4: Ghana Macroeconomic Indicators 1967-1974

Indicator	1967	1968	1969	1970	1971	1972	1973	1974
GDP Growth Rate (%)	-0.2	1.8	1.2	4.6	2.5	-5.3	2.5	3.7
Trade Bal. (¢'m)	26	59	81	143	-36	-	-	-
Current Account (¢'m)	-117	-69	-70	-21	-191	-	-	-
Gross Reserves ($'m)	95	106	80	74	53	115	194	108
Net Reserves ($'m)	-52	-44	-103	-24	-11	126	212	2
Inflation (%)	-9.7	10.7	6.5	3.0	8.8	10.8	17.1	18.8
Govt. Budget bal. (¢'b)	-59.7	-69.2	-39.0	81.4	81.4	9.4	-10.6	-29.0
Savings/GNP	9.0	13.0	11.0	11.5	6.5	14.3	12.1	8.0
Minimum Wage Index	61	61	57	55	51	-	-	-

Source: Aryeetey and Fosu (2002) pp 18.

Appendix 1.5: Ghana Macroeconomic Indicators 1974-1983

Indicator	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Real GNP per capita 1975 prices (¢'m)	520	459	404	403	435	408	393	365	325	320
Money Supply (¢'m)	697	1,009	1,430	2,386	4,088	4,631	6,058	9,415	11,440	16,861
Current Account ($'m)	-	-2.7	-25.5	-144.4	-109.3	40.4	-53.7	-508.1	-192.3	-294.2
Inflation (%)	18.4	29.8	56.1	116.5	73.7	53.9	50.1	116.5	22.3	122.8
Govt. Budget Deficit(¢'m)	357	624	870	1,479	1,906	1,646	4,440	4,675	3,593	4,511
Agric. Prod. (000 tons)										
Cereals	890	672	689	639	540	780	674	725	543	308
Starchy Staples	7,988	7,462	4,435	5,995	4,105	3,927	4,349	4,114	4,431	3,657

Cocoa	382	397	327	277	268	281	254	220	179	159
Exports Index (1968=100)	55.1	56.4	59.1	48.7	40.1	38.2	39.5	40.7	46.0	32.6
Minerals Index Prod. (1975=100)	-	100	97	87	76	65	64	60	54	46
Timber Prod. (cubic meters)	-	623	565	586	591	285	185	222	-	-
Real Minimum Wage (1977=1000	292	225	144	100	77	50	44	46	38	32

Source: Aryeetey and Fosu (2002) pp 18-19.

Appendix 1.6: Ghana Macroeconomic Indicators 1983-1992

Indicator	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**
GDP growth rate (5)	-4.6	8.6	5.1	5.2	4.8	5.6	5.1	3.3	5.3	3.9
Agric. Production:										
Cereals	308	669	676	867	1057	1146	1177	845	1436	1254
Starchy Staples	3657	3814	5868	5362	6001	6815	6840	5208	10808	10277
Cocoa	159	175	219	226.4	205	246.6	296	284	277	-
Manufacturing Output Index 1977=100				49.3	54.2	56.8	63.0	63.5	71.3	76.9
Current Account ($m)	-156.9	-76.5	-156.5	-85.3	-98.0	-66.9	-89.7	-223.1	-251.6	-376.2
Inflation (%)	122.8	39.6	10.4	24.6	39.8	31.4	25.2	37.2	18.0	10.0
Savings/GDP (%)	3.0	5.9	7.1	8.2	11.3	12.5	13.7	11.6	-	-
Investment/GDP (%)	3.7	6.9	9.6	9.7	13.4	14.2	15.5	16.0	-	-
Av. Real Earnings in Public Sector	48	67	100	-	122	160	167	164	171	270

Source: Aryeetey and Fosu (2002) pp 20-21.

Appendix 1.7: Ghana Macroeconomic Indicators 1992-2004

Indicator	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GDP Growth Rate	3.9	5.0	3.8	4.5	5.2	3.1	4.7	4.4	3.7	4.2	4.5	5.2	5.6
Agric Production (000 tons)				1825	1770	1677	1814	1686	1849	1923	2007	2129	2284
Inflation CPI %	10.1	25.0	24.9	60.0	70	33	15.8	11.8	40.5	21.3	15.2	26.7	14.8
Rediscount Rate (BOG) %				45.0	45.0	45.0	37.0	27.0	27.0	27.0	25	25	23

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Appendix 1.8: Manufacturing Production for the Period 1995-2001

	Weight %	1995	1996	1997	1998	1999	2000	2001
Food Manufacturing	15.00	99.6	102.5	109.3	130.3	196.6	235.4	269.9
Beverage	8.11	109.0	116.2	123.9	124.0	164.3	190.8	199.8
Tobacco	7.75	52.0	53.1	53.1	53.6	37.1	37.1	46.6
Textiles etc.	13.71	54.8	56.1	55.5	55.9	50.0	54.7	57.8
Sawmill & Wood	7.22	100.2	105.3	105.0	125	123.3	134.7	140.1
Paper & Printing	1.94	45.1	49.3	54.1	54.3	54.5	55.0	56.3
Petroleum Refinery	19.00	101.4	103.5	7.3	56.6	58.6	68.0	72.1

Chemical Products	6.56	140.0	148.2	159.8	159.8	159.1	159.2	170
Cement & Non-Metallic Minerals	2.98	258.1	258.9	241.8	293.1	342.2	293.1	261
Iron & Steel	3.25	581.6	584.5	590.5	413.4	561.4	863.3	819.5
Non-Ferrous Metals	9.62	119.8	125.6	105.2	37.3	77.6	104.0	108.7
Cutlery & Other Non-Ferrous Metals	0.49	102.4	116.4	116.4	116.8	143.1	154.3	142.0
Electrical	1.34	42.9	38	30.8	29.9	25.2	25.7	25.3
Transport Equipment	3.03	-	-	-	-	-	-	-
All Manufacturing	100	111.00	114.4	100	99.5	120.5	143.2	150.2

Source: Statistical Service (2001), page 13.

Appendix 2.1: General Characteristics of Small Firms

Characteristics	General	LDCs	Comment
Owner/Manager			
Growth Orientation	High	Low	Owner/managers in LDCs seek less growth due to (a) lack of resources (b) avoidance of high regulation (c) unstable environment (d) political risk and (e) low ambition (f) push into self-employment for lack of formal employment.
Ability	High	Low	There is low level of entrepreneurial ability in LDCs due to (a) short history of entrepreneurship (b) Experiences are often obtained in state institutions (c) weak

			educational and training institutions.
Family Support & Experience	Strong	Weak	Family support is weak in LDCs due to (a) less entrepreneurial family background (b) unclear succession arrangement (c) lack of family resources (d) short or no family line of business.
Portfolio Ownership	High	High	Small owner/managers show entrepreneurial flair by investing in many businesses. In LDCs spreading limited resources thinly impact negatively on growth.
Involvement of Immigrants	Average	High	The indigenous people in LDCs lack resources, technical and general business knowledge. Immigrants have dominated the small firm arena in LDCs.
Firm Characteristics			
Age	Average	Young	LDCs small firms are younger due to short entrepreneurial history and high failure rate.
Location	Spread	Urban Areas	Small firms in LDCs are centered in urban centers due to lack of infrastructure and demand in rural areas.
Size	Spread	Small	Firms in LDCs are often smaller in terms of financial criteria like sales, but employ more people due to (a) lack of equipment (b) unsophisticated operations (c) production of basic products. LDCs firms do not often migrate along the size continuum.
Ownership	Spread	Single	Lack of trust and cooperation do not foster joint ownership in LDCs.
Business Strategy			
Marketing	High	Low	Owner/managers in LDCs lack resources, knowledge, expertise and confidence. Less competitive business environment in LDCs
Product & Process Innovation	High	Low	As above
Financing Sources	Many	Few	Sources of financing in LDCs are highly limited to owner/managers equity finance.
Export	High	Low	Export in LDCs are limited due to (a) lack of resources (b) expertise (c) Know how (d) language barrier (e) confidence (f) uncompetitive products.
Skills and Training	High	Low	Small firms in LDCs have less skills and training due to (a) lack of resources (b) lack of expertise (c) unwillingness of owner/managers to invest in training (d) lack of educational and training institutions.

Appendix 3.1

List of Interview Issues and Questions

Background Information

1. Please could you tell me of the nature of your job, your daily routine, what you like/dislike about your job?
2. Please could you outline the development of the business (history/background)?
3. What is the legal status of the business?
4. Please could you describe the ownership and the management structures of the business?
5. Please specify the present total number of employees (full-time, part-time, owners, non-owners)?
6. What is the total turnover of the business for the most recent financial year?
7. Do you consider the business as growing and why?
8. What factors lead to growth or non-growth of the business?

Industry:

1. How do you define the industry in which the business operates?
2. How many firms are in the industry?
3. Who are the major players in the industry?
4. Do you consider the industry as a growing one and why?
5. How is growth defined within the industry?
6. Which are the most growing firms within the industry and why?
7. What are the major factors that affect growth of the industry?

Owner's Characteristics:

1. How did you come to be in this business?

2. What are the main drivers for being self-employed? Have these drivers changed overtime?
3. What are your main personal goals? What are the main goals of the Business? Do your personal goals relate to the business goals?
4. How do you measure your own success and the success of the business?
5. What personal skills and capabilities are required to achieve high growth?
6. Do you have any other businesses, how are they related and which ones are more important to you?

Business Strategy:

1. Do you intend to grow the business? If yes, how do you intend to achieve it?
2. What are the major things that will make the business grow?
3. At what rate do you intend to grow the business and why?
4. Who determines how the business should grow?
5. Are plans for growth formalized and for what period?
6. Who are your major competitors and do they impact on your growth plans?
7. What makes your business different from your competitors?

Characteristics of the Firm:

1. What are some of the characteristics of the firm that impact on growth? (E.g. Location, Age, Size, Industrial Sector, Ownership, Service Delivery).

External Environment:

1. Please outline the impact of Government policies and regulations on business operations and how they affect business growth.
2. Please outline the impact of general economic conditions on your business operations and how they affect growth.
3. Please outline the impact of technology and the state of infrastructure in the country on your business operations.

Constraints:

1. Please outline some of the major difficulties that you consider are affecting business operations and growth.
2. What other issues do you consider to be important to the growth of small businesses?
3. Any other information you consider to be important to this study?

Name of Firm: **Position of Respondent:**

1. When was this business started? Year……..

2. What percentage of ownership do you own?…….%.
3. How many employees did the business have as at the end of the following years

1999 2000 2001 2002

2003

Full Time	……..	……..	…….	
……..	……..			
Part Time	……..	……..	…….	
……..	……..			

4. What was the Turnover of the business for the following years?

	1999	2000	2001	2002	2003
Cedis (Millions)	……..	……..	…….	……..	……..

5. How did you intend to grow the business for the past 5 years?

(a) Above Average (above 50% p.a.) ( )

(b) Average (21-50% p.a.) ( )

(c) Below Average (1-20% p.a.) ( )

(d) No Growth (Zero Growth p.a.) ( )

(e) Decline (Negative growth p.a.) ( )

MISSING

PRINT

Appendix 3.2: Summary of Qualitative Data- Individual Firms Analysis.

Firm	Owner Characteristics	Firm Characteristics	Business Strategy	Constraints
1	Age-62yrs. Nationality-Ghanaian. Had prior industry experience. Strong family background in self-employment. Growth oriented. Had no other business. Main motivation of becoming self employed was to be independent and creative. Highest level of education was A- Level.	Located in a commercial area of Accra. A family business. A limited liability company. Produces office and household furniture using hard wood.	No direct export. Has a niche market. No distribution network. High quality product.	Lack of capital. Inefficient and old equipment. High competition from imports. High cost and unavailability of raw materials. High competition from informal producers.
2	Age-54yrs. Ghanaian. Had prior industry experience. University graduate. Does not intend to introduce further shareholders. Strong entrepreneurial family background. Growth oriented. Had no other business.	Located in Kumasi. Process wood for the local market and export. Two shareholders.	Export oriented. Continued improvement in production process. Structured management. No distribution network.	High cost of borrowing. High cost of raw materials. High industry regulation.
3	Age-41yrs. Ghanaian. Had previously set-up and managed his own firm. Education "A" Level. Growth oriented. Has no other business.	Located in a suburb of Accra. It has a single shareholder and operates as an enterprise. All major decisions are taken by the owner/manager. It manufactures household and office furniture using metal, hard wood or cane.	Has no distribution network. No export. Niche market strategy. Used different raw materials to remain competitive.	Lack of finance. Lack of efficient equipment and tools. Uncommitted staff. High competition from imports and informal businesses.
4	Age 46 years. Has other business. A Ghanaian. No intention to introduce new shareholders. Started as a trader. No prior managerial experience. University graduate. Both parents self employed. No intention for further growth. Motivated by high sense of achievement and independence.	Had 3 locations all in industrial areas in Accra. Products: general printing, excise books, photocopier papers and toilet paper. Limited liability company. Managed 2 shareholders.	Strong distribution network, high dependence on government business. Modern and efficient equipment. No export experience. Strong financial backing with suppliers' credit.	Lack of skilled and committed employees. Faced a high level of delayed payments and a high cost of borrowing.

Appendix 3.2 Continued: Summary of Qualitative Data- Individual Firms Analysis.

Firm	Owner Characteristics	Firm Characteristics	Business Strategy	Constraints
5	Age 44 years old. Intended to introduce new shareholders. 2 Ghanaian shareholders. Both shareholders previously operated their own businesses. University graduates. Had some self employed family members. No other business. Previously managed family business. Growth oriented. Motivated by independence.	Located in Accra around cluster of printing firms. Limited liability company. 2 shareholders. Main product general printing. Managed by two shareholders. Lack of cooperation between them.	High reliance on government related businesses. No distribution network. No export intention.	Lack of access to credit. Lack of equipment. Competition from informal businesses.
6	Age 42 years. Ghanaian. No prior startup experience. No prior managerial experience. A university graduate. Intended to grow the business. No other business. Unemployment made him become self employed.	A limited liability company. It was into general printing. Located in Accra outside the cluster of printing firms. Two shareholders but managed by one shareholder.	Range of customers. No distribution net work. Rely on reference and direct contact for business. No export intention. High on process innovation, but low on product innovation. Relied on quality and customer relationship.	Lack of access to credit. High cost of borrowing. Competition from informal businesses.
7	Ghanaian. Age 46. Has prior experience in business setup. Holds 'A' level certificate. Both parents were self employed. Inherited her mother's business. Growth oriented. Reasons for self employment: independence and a high sense of achievement. Had no other business.	Managed by one person. A limited liability company, located in Accra. New factory being put up at source of raw material. Processed fruit drinks.	No distribution net work. Competitive advantage of using natural fruits. No marketing strategy. No management team.	Lack of access to finance. High cost of borrowing. Lack of and high cost of inputs.
8	Age-59 years. Ghanaian. Had prior managerial and industry related experience. Had no previous business. Strong entrepreneurial family background. Growth oriented. Had no other business. A lawyer.	A limited liability company. Family business. Located in a residential area in Accra. Produced cookies.	Low priced products. Initial market target school children now opened up to the general public. Distribution channels exist. No export base. Structured management team.	Lack of credit. High borrowing cost. Lack of committed staff. Competition from imports.

Appendix 3.2 Continued: Summary of Qualitative Data- Individual Firms Analysis.

Firm	Owner Characteristics	Firm Characteristics	Business Strategy	Constraints
9	Indian. Age 50 years. Growth oriented. University graduate. Worked with ministry of Agriculture. No prior business start-up experience. Strong entrepreneurial family background. Had no other business.	Located in an industrial area in Accra. A limited liability company. Main products biscuits.	Strong distribution network. High on advertising. Target lower end of the market. High investment in equipment. No export.	Competition from imports. High cost of borrowing.
10	Age 46 years. An Indian. Holds Master degree. Intended to grow the business. Traded in the same products before going into production. Involvement of other family members.	Main products plastics films. Located in an industrial area in Accra. Limited liability company.	No structured management. Strong family support. No export. Sell directly to retailers. No distribution net work.	Lack of capital and high cost of borrowing. High cost of input.
11	Age-35yrs. Indian. Had no prior business set-up experience. Strong prior industry experience. Not growth oriented. Had other businesses abroad. Strong entrepreneurial family background.	It was a family business that was acquired by a family member. A limited liability company and managed by the key shareholder. Located within an industrial area in Accra. It produced plastic household items.	Large scale production. Low priced items. Strong distribution network. Exported 60% of output. No marketing strategy. Structured management team. New products were frequently added.	High raw materials price. Bureaucracy in the export market. High cost of borrowing.
12	Age-35 years. Lebanese. Had no prior start-up experience. Had prior industry experience. No managerial experience. A university graduate. Growth oriented. Strong entrepreneurial family background. Had no other business.	A family business owned by three brothers. Located within an industrial area in Accra, and managed by one of the shareholders. Produced pvc pipes for industrial and residential use.	High reliance on government business. Exported 10% of output. Strong distribution network. Had not added any new product for past two years.	Delayed payments. High cost of raw materials. Bureaucracy in the export market.
13	Age-46years. Ghanaian. No start-up experience. Had 'A' Level certificate. Had some managerial experience. Growth oriented. Had other businesses.	A family business. A limited liability company. It fabricates aluminum doors and windows. Located on the outskirts of Accra.	Target the high end of the market. High priced products. Main customers were corporate organizations. No structured management team. No export. Diversified activities.	Lack of skilled labor. Uncommitted employees. Delayed in payments. High competition from informal businesses.

Appendix 3.2 Continued: Summary of Qualitative Data- Individual Firms Analysis.

Firm	Owner Characteristics	Firm Characteristics	Business Strategy	Constraints
14	Age-58years. Ghanaian. Strong prior experience in business start-ups. No prior industry experience. Growth oriented. Strong managerial experience. Had no other business. University graduate.	Located close to the biggest market in Ghana. A family business. A limited liability company. Produced aluminum cooking utensils.	Various products range i.e. low and high priced products. Export 70 % of output. Leading firm in new product introduction. Strong distribution network. Structured management.	High cost of borrowir High cost of ra materials. Hi competition frc informal producers.
15	Age-39yrs. Ghanaian. A graduate. Had strong prior experience in trading. Strong managerial experience. Growth oriented. No entrepreneurial family background Motivated by independence and a high sense of achievement.	Family business. Located in an industrial area in Accra. Produced aluminum cooking utensils. Limited liability company.	Had distribution network. Exported over 75 % of output. Lacked sufficient equipment and tools. Do not regularly add on new products.	High cost of borrowir Lack of access credit. High cost of ra materials. Hi competition frc informal producers.

Appendix 3.3 A: Summary of Qualitative Data- Analysis.

Owner/Manager Characteristics

Factor	Findings	Example of Quotations
Other Business Interests (OBI)	Most owner/managers focused on single business. Most respondents did not want to spread their resources thinly. Firms with OBI benefited from networking. OBI appeared to have a mixed relationship with growth.	*"If you have the capital then you can think of various investments."* *"I think sometimes trying to expand into different areas is stressful unless you get trustworthy people."* *"We have investments in properties; in case we need any collateral/security for a facility we can use it."*
Nationality	The immigrant owner/managers were mostly Indians and Lebanese. Found mostly in the plastics and rubber and the wood processing sub-sectors and enjoyed a higher growth rate. Had a stronger networking and superior business strategies (e.g. higher technology, planning and supervision).	*"The foreign managers are more likely to be committed to their businesses, and provide high supervisory role than we the Ghanaian managers".*
Prior Industry Experience (PIE)	Most owner/managers had PIE. There was no obvious relationship between PIE and growth. Trading experience in products being manufactured appeared to be positively affecting growth.	*"I had a lot if experience from trading before moving into manufacturing that helped me a lot."* *"I learned lessons from the mistakes made in the past."* *"You need to have experience in what you are doing."*

Appendix 3.3A Continued: Summary of Qualitative Data- Analysis.

Owner/Manager Characteristics

Factor	Findings	Example of Quotations
Prior Managerial Experience (PME)	PME had a positive relationship with growth. Eight owner/managers had prior managerial experience.	*"I tell you honestly I go to the factory you ask me to switch on one machine I do not know. But if you have the right caliber of personal and you have good managerial and entrepreneurial skills you can easily run an agric process business."*
Education	Higher level of education had positive relationship with growth. Networking benefit arose from higher level of education. Owner/managers with higher level of education adopted superior business strategies e.g. exporting and marketing.	*Without education, I would have remained a small trader; I would not have grown the business to this level."*
Entrepreneurial Family Background (EFB)	EFB tended to be associated with higher growth. Most firms were in the hands of the 1st generation. Other family members tended to have unrelated businesses. The immigrants were more likely to have EFB.	*"My mother was making bread that also motivated me. That is why I started with cookies. But the business cannot remain small like that of my mother. I have to be different. I have to make it big."* *"It is in my blood, from generation to generation. You start your own business to employ people and basically to break your own storms, to achieve the goals.*

Appendix 3.3A Continued: Summary of Qualitative Data- Analysis.

Owner/Manager Characteristics

Factor	Findings	Example of Quotations
Growth Intention (GI)	The larger and growing firms appeared to be less likely to seek further growth. Firms with non GI were concerned about the impact of growth on the firm.	*"High growth rate can also lead to complete loss of entire gains made as it did happen to my father and grand father.*

Appendix 3.3b: Summary of Qualitative Data- Analysis.

Business Strategy

Factor	Findings	Example of Quotations
Product Quality (PQ)	There were mixed reactions as to how PQ impacted on growth. While high PQ was needed to compete with imports, low quality products with market penetration could lead to growth. Exporters focused on high quality.	*"My greatest assessment is product quality, because if the quality of the product is good it makes it much easier for the sales man to sell it or for the marketing man to market it."* *"The thing is that demand is not so high as to make it possible to invest in very high technological equipment to achieve a very high quality like the Europeans."*
Product Innovation (PdI)	Pure PdI was found to be low, due to lack of resources and protection of innovative activities. New but existing product introduction was frequent among the exporters and the large firms. Growth appeared to be positively affected by PdI.	*"No body is producing ..... in Ghana. We wanted to produce it but the cost of the equipment and the initial capital was too high."*
Process Innovation (PrI)	PrI was observed to impact positively on sales growth. But had a negative impact on employment growth. Lack of skills impeded the use of a highly advanced technology.	*"The kinds of machine we are using do not allow us to increase our production easily. It does not allow us to be price competitive."* *"In a situation where most of the work is done manually and you have lazy workers, then efficiency becomes a problem."* *"Because of change in technology there was no real use for high labor."*

Appendix 3.3b Continued: Summary of Qualitative Data- Analysis.

Business Strategy

Factor	Findings	Example of Quotations
Marketing Orientation (MO)	High MO had a positive relationship with growth. Smaller firms had a lower MO due to lack of resources and low demand.	*"What we need most is finance to undertake our marketing activities to grow the business."* *"As we are becoming bigger we need to strengthen our marketing department."*
Distribution Channels (DCs)	There existed a direct relationship between growth and the use of DCs. The large firms were more likely to have DCs.	*"We have a niche market so the people prefer to buy from us directly and most of our products are custom made."* *"We cannot be assured that if we sell through distributors our quality will be maintained."* *"We also do not have resources to produce in high quantities to warrant the use of distributors."*
Export	There was no clear evidence that exporting firms had a higher growth rate. Exporting firms were larger and older than non-exporting firms. Export was industry based. Exporters faced difficulties bribery and corruption, political instability, lack of resources and know how.	*"Here in Ghana I will not have any financial institution to give me money for marketing and to export."* *"Apart from 2 companies that are exporters others seem not knowing what to do."* *"The export market you are able to earn foreign exchange and the competition is less keen."* *"There are more French speaking countries in West Africa than English speaking.* *They prefer trading with each other therefore we cannot easily enter their market."*

Appendix 3.3b Continued: Summary of Qualitative Data- Analysis.

Business Strategy

Factor	Findings	Example of Quotations
Management Team (MT)	The large and older firms were more likely to have MT. High growth firms considered MT as a very important factor in dealing with complexities associated with growth.	How do you intend to keep on growing this business? "*I have said already, keep on planning, there must be a teamwork. Think of team, team, and team.*" *"Sometimes management determines how you should grow, and not capital or equipment. You need management team to grow.*"

Appendix 3.3C: Summary of Qualitative Data- Analysis.

Firm Characteristics

Factor	Findings	Example of Quotations
Sector	Growth rates varied among the sub-sectors. The best performing sub-sector was metal works and the least growth sub-sector was furniture and wood processing. The aluminum firms had a competitive advantage in the supply of raw materials. The wood industry was subject to high regulation and faced high import competition.	*"The wood industry is shrinking. The trade liberalization policy is the problem. The large imports at very cheap prices affect the growth of the industry in Ghana. It is preventing local manufacturers from expanding their businesses."*
Location	Location played a role in growth. Firms located near market centers had an advantage as well as those in industrial areas. There was an unequal distribution of infrastructure within areas.	*"Our delivery van can go to the market five (5) times a day; the manufactures from other places make less than two trips in a day."*
Size	Larger firms were found to grow faster. Small firms lacked resources. Small size was also found to be self imposed in order to avoid taxes.	*"When the business becomes big the government focuses on you for more taxes."*

Appendix 3.3c Continued: Summary of Qualitative Data- Analysis.

Firm Characteristics

Factor	Findings	Example of Quotations
Age	Younger firms were more likely to grow faster. The older firms were less likely to attract more aggressive entrepreneurs. Older firms were however more likely to raise credit because they have good track records.	*"Being very young means we have the capacity to grow."* *"You know your track records speak a lot in Ghana because we are a 28 year old company that works very heavily in our favor."* *"We are in finance and know that if you approach a financial institution for credit, the first thing they want to look at is a minimum of 3 years financial statements."*
Number of Owners	Number of owners was found to affect growth in two ways. (1) Most of the firms needed more resources; hence large number of owners could possibly provide additional resources needed for growth. (2) Lack of trust and cooperation among owners adversely affected growth.	*"Every decision here solely depends on me and since it has expanded there is too much pressure on me."* *"It is getting a partner with finance that will assist the company to grow at a faster rate."*

Appendix 4.1: Summary of Research Questions and Related Hypotheses.

Factor Category	Research Questions	Hypotheses	Impact
1. Owner/Manager Characteristics.	Which characteristics of the owner/manager have significant impact on small firm growth in LDCs?	*(H1A) Growth is significantly and positively influenced by the fact that a firm is managed by an owner/manager with higher growth aspiration.*	Positive
		(H1B). The level of human capital will positively influence growth. In particular firms controlled by owner/managers with higher level of (a) education, or (b) related firm experience will achieve higher growth.	Positive
		H (1C) Growth is positively influenced by an entrepreneurial family background (i.e. firm managed by owner/manager who has a family entrepreneurial experience is more likely to achieve higher growth).	Positive
		H (1D) Growth is negatively and significantly influenced by the fact that the owner/manager owns several firms.	Negative
		H (1E) Growth is positively and significantly influenced by the fact that the owner/manager is an immigrant.	Positive
2. The Firm Characteristics.	What are the major characteristics of the firm that impact on growth in LDCs?	*H (2A). Growth is significantly and positively influenced by the size of a firm.*	Positive
		H (2B). Growth is influenced by the sector within which a firm operates (e.g. firms operating within the metal sub-sector will show the highest growth rate).	
		H. (2C) Growth is positively and significantly influenced by the age of a firm.	Positive
		H. (2D) Growth is negatively influenced by the fact that a firm has several owners (i.e. firms with multiple ownership are less likely to achieve high growth).	Negative

Appendix 4.1 Continued: Summary of Research Questions and Related Hypotheses.

Factor Category	Research Questions	Hypotheses	Impact
3. Business Strategy	3. What kind of business strategies adopted has significant influence on small firm growth in LDCs?	*H (3A). The level of importance placed on marketing activities will positively and significantly influence growth.*	Positive
		H (3B). The level of importance placed on innovative activities will positively and significantly influence growth. In particular firms that show importance to: (a) new product introduction (b) improvements in existing products or (c) process innovation are more likely to achieve higher growth.	Positive
		H (3C). Growth will be positively and significantly influenced by the fact that a firm is engaged in export.	Positive
		H (3D). Growth is positively and significantly influenced by the fact that a firm is engaged in formal planning.	Positive
		H (3E).Growth is positively and significantly influenced by the fact that a firm is engaged in training and skills development of employees.	Positive

Appendix 5.1: Literature Overview of Small Business Research.

Author	Research Question/Objective	Method	Data Analysis Technique	Implications for Small Business Research
Davidsson et al (2002)	To ascertain whether small, independent firms demonstrate the greatest growth rates in Sweden.	Quantitative Public database	Regression analysis	Allow for modeling of growth by using many and varied variables. To test the explanatory power of the variables.
Roper (1999)	What determines small firms' choice of business strategy? And, how does strategy choice change subsequent business performance?	Quantitative.	Multivariate techniques.	Allow for the identification of the relative importance of various determinants of growth and quantitative predictions to be made.
Lebrasseur et al (2003)	Examination of the relationships between pre-startup activities, expansion intentions and activities, and how they combine to influence early stage performance	Quantitative Survey	Statistical analysis using correlation.	Awareness of growth factors helps in the understanding of forces that push small firms into higher complexities. Potential weaknesses may be present in the measurements of early stage performance. longitudinal study is advocated.
Andersson (2003)	To develop a multi-theoretical framework for the analysis of small firm growth.	Qualitative Case Study Qualitative interview and secondary data		Allow for deeper understanding of small firm growth which is considered to be complex, dynamic and fragmented.
Blundel and Hingley (2000).	Investigates the growth of SMEs engaged in vertical inter-firm relationships.	Qualitative Inductive In-depth interviews.	Multi-case approach that allowed for high generalisability.	To gain deeper understanding in an area with no systematic research.
Watson et al (1998)	Investigates start-up, development and growth of a cohort of new start small firms in West Yorkshire (UK).	Quantitative Postal questionnaire survey.	Empirical Descriptive and multivariate analysis.	Analytical model developed for analyzing small and young business viability. Grounded approach is required to test the appropriateness of the model.

Appendix 5.1 Continued: Literature Overview of Small Business Research.

Author	Research Question/Objective	Method	Data Analysis Technique	Implications for Small Business Research
Barkham et al (1996)	To conduct an in-depth analysis of growth determinants in established small firms in four regions in UK.	Quantitative. Face to face semi-structured interview.	Multivariate techniques.	Allow for the identification of the relative importance of various determinants of growth and quantitative predictions to be made. Certain factors considered as difficult to quantify were ignored (e.g. owner's motivation).
Siu and Kirby (1999)	To investigate into the marketing practices of Chinese small firms in Hong Kong.	Combination of qualitative and quantitative approaches	Stepwise 'stage' approach.	Initial exploratory qualitative approach allows for gaining knowledge into the unknown area. Empirical data analyzed through descriptive method assists in the development of hypotheses, which can be tested at the third stage through quantitative approach.
Fuller and Lewis (2003)	To examine the way that the meaning of information and communications technology (ICT) is constructed by owner managers in the context of their relationships with stakeholders.	Qualitative Semi-structured interview with 50 owner-managers.	The use of several methods including analytic induction to assist in theory development, discourse and narrative analysis and content analysis.	Provides a grounded theory to explore and explain the significance, meaning, and medium of exchange in relationships from perspective of owner-managers.
Watson (2001)	Examination of export information acquisition and export performance of small firms in the UK.	Combination of qualitative and quantitative approaches	Qualitative interview used to develop hypothesis that were tested at second stage using statistical analysis	Exploratory qualitative interview allow for comprehensive theory development and ensure that current issues are included in the research work.

Appendix 5.2: Growth Concepts and Measurements

Research	Growth Indicators	Growth Measures	Period Of study	Sample Size	Adjust-ment	Size No. Employees	Unit of Analysis
Brown et. al (2004)	Employment Sales Value	Annual Rate log(g1/g0)	8 yrs	297	PPI-deflated	1-249	Firm
McPherson (1996)	Employment	Log (g1-g0)/n	n/s	1,819	n/s	1-50	Firm
Davidsson et. al. (2002)	Employment	(g1-g0)/(g1+go)/2	9 yrs	11,196		Above 20	Legal entity or business
Barkham et al (1996)	Sales Value Employment	Ln((x1/x0)^1/t)	5 yrs	172		1-50	Firm
Honjo (2004)	Sales	(LnSt-LnS0)/(t1-t0)	3 yrs	3,484	n/s		Firm
Delmar et al (2003)	Sales Employment	19 diff. measures	10 yrs	11, 748		Above 20	Firm
Hart and McGuinness (2003)	Employment	LnSt-LnS0)/(t1-t0)	4 yrs	612		Below 50	Firm
Wiklund and Shepherd (2003)	Sales Employment	Relative change in size.	4 yrs	326	n/s	1-50	Individual
Perren (1999)	Sales Employment	S1-S0 E1-E0		16		1-40	Firm
Garnsey, et al (2003)	Employment		10 yrs	403			Firm
Almus (2002)	Employment	Ln(St-LnS0)/(t1-t0)	5 yrs	2000			Firm
Smallbone et al (1995)	Sales		11 yrs	306		Below 100	Firm

Appendix 5.2 Continued: Growth Concepts and Measurements

Research	Growth Indicators	Growth Measures	Period Of study	Sample Size	Adjust-ment	Size No. Employees	Unit of Analysis
Lohmann (1998)	Sales	Annual % increase.	3 yrs	386	n/s		Firm
Bruton and Rubanik (2002)	Employment	(St-S0)/(t1-t0)		45			Firm
Watts et al (1998)	Sales Employment	Annual % increase.		256		1-395	Firm
Gundry and Welsch (2001)	Sales	(g1-g0)/(go)		832			Individual
Davila et al (2003)	Employment	(g1-g0)/(go)	5 yrs	988			Firm
Davidsson and Henrekson (2002)	Employment	G1-g0	10 yrs	9931			Firm

Appendix 5.3

QUESTIONNAIRE

Section A: Firm Background

1. When was this firm established? Year……

2. What is the legal status of the firm?
   ☐Limited Liability Company ☐Sole proprietor ☐Partnership
   ☐Others (Specify)……

3. Where is the firm located? ……City/Town

4. If there are other owners please answer the following for self and all owners:

Owner	% Holding	Age Years	Educational Qualification	Owner Since (Year)	Nationality
a	……	……..	……	……	……..
b	……	……..	……	……	……..
c	……	……..	……	……	…….
d	……	……..	……	……	…….

5. What is your relationship with other owners if there are other owners?

Owner (Others)	1 (Immediate Family)	2 (Extended Family)	3
B	……..	……..	……..
C	……..	……..	……..
D	……	……	……

Section B: Growth Measures and Intention

1. How many people were in employment of the firm including owners for the following years?

	2000	2001	2002	2003	2004
Full Time	…….	……..	…….	……..	……
Part Time	…….	……..	…….	……..	……
Total	-------	----------	----------	----------	---------
	======	=======	=======	=======	=======

2. What was the turnover of the firm for the following financial years?

	2000	2001	2002	2003	2004
Turnover (¢'million)	…….	……..	…….	……..	……

3. Did you intend to increase the number of employees over the period 2001 to 2004?

☐ Yes ☐ No

4. If yes at what rate did you intend to increase number of employees per annum?

Full-time Employees □ Between 0-10% □ Between 11-20% □ Between 21-50% □ Above 50%

Part-time Employees □ Between 0-10% □ Between 11-20% □ Between 21-50% □ Above 50%

5. Did you intend to increase turnover during the period 2000 to 2004?

☐ Yes ☐ No

6. If yes at what rate did you intend to increase turnover per annum?

☐ Between 0-10% ☐ Between 11-20% ☐ Between 21-50% ☐ Above 50%

7. During the period how important was growth in the following to you?

Use a scale of 1-5 Not Important (1) to Very Important (5)

	Scale
Turnover	.....
Employment	.....
Assets	.....
Profits	.....

Section C: Characteristics of the Owner/Manager

1. Please provide details of your working career progression starting from the present and working backwards:

Position of	Activity of Firm	Location of Firm	Duration of Job (years)
a.	.....	.....	.....
b.	.....	.....	.....
c.	.....	.....	.....
d.	.....	.....	.....

2. Do you have any other business(es)? ☐ Yes ☐ No

3. If yes does the other business(es) provide any advantage to this business?

☐ Yes ☐ No

4. Is any member of your family including extended family self employed?

☐ Yes ☐ No

5. How did you become owner of this firm?

☐ Start ☐ Inherit ☐ Buy

6. What motivated you to start your own business?

Use scale of 1-5 (1 not important) to (5 very important)

Factor	**Scale**
Independence	……..
Meeting a Challenge	…….....
Desire for Experience	……..
Perception of Market Opportunity	……..
Personal Achievement	……
Make Money	……
Lack of Employment	……
Job Dissatisfaction	…….
Redundancy	……..
Others (specify)	……..

Section D: Firm Characteristics

1. Which sector is your firm located?

Furniture and Wood Processing ☐
Metal Sector ☐
Food Processing ☐
Paper and Printing ☐
Plastics and Rubber Products ☐
Others (Please Specify) ☐

Section E: Business Strategy

1. What percentage of turnover is spent on marketing activities for the following years?

	2000	2001	2002	2003	2004
% of Turnover	…….	……..	…….	……..	……

2. Do you export? ☐ Yes ☐ No

3. If yes what proportion of your revenue is accounted for by export in the following years?

2000	2001	2002	2003	2004
……%	……..%	……%	……%	……%

4. What proportion of your export in terms of revenue is accounted for by the following geographical areas?

	% of export
West African French Speaking Countries	…….
West African English Speaking Countries	…….
Other African Countries	…….
Europe	…….
U.S.A	……..
Asia	……
Others	……..

5. How frequently do you add new products onto your line of products?.....

Use scale of 1-5 (1 Not Often) (2 Little Often) (3 Often) (4Very Often) and (5 Extremely Often).

6. How often do you make significant improvement in your existing products? …….

Use scale of 1-5 (1 Not Often) (2 Little Often) (3 Often) (4Very Often) and (5 Extremely Often).

7. How often do you make significant improvement in the

production process? .....

Use scale of 1-5 (1 Not Often) (2 Little Often) (3 Often) (4Very Often) and (5 Extremely Often).

8. How important are the following to the growth or survival of the firm?

Rank your answer on a scale of 1-5 (1 not important) (2 Little Important) (3Important) (4Very Important) and (5 Extremely Important).

	Scale (1-5)
Low Cost Products	.....
Large Scale Production	.....
Niche Market	.....
High Quality Product	.....
Distribution Network	.....

7. Do you have a written business plan? ☐ Yes ☐ No

8. How often do employees attend external training programs? .....

Use a scale of 1-5 (1 Not Often) (2 Little Often) (3 Often) (4Very Often) to (5 Extremely Often).

9. How often do you engage external resource person to offer training to employees?

.....

Use a scale of 1-5 (1 Not Often) (2 Little Often) (3 Often) (4Very Often) to (5 Extremely Often).

10. How often do employees engaged in a less structured on the job training? .....

Use a scale of 1-5 (1 Not Often) (2 Little Often) (3 Often) (4Very Often) to (5 Extremely Often).

Section F: Constraints to Growth

1. How important has the following impacted on the growth of your business for the

period 2000-2004?

Use a scale of 1-5. (1 not important) (2 Little Important) (3Important) (4Very Important) to (5 Extremely Important).

	Scale(1-5)
1. Corruption	.....
2. Late payment of bills	.....
3. Political Persecution	.....
4. Lack of Transparency in contract award	.....
5. Competition from informal businesses	.....
6. Competition from imports	.....
7. Lack of demand	.....
8. High and Inefficient Tax System	.....
9. Lack of efficient legal system	.....
10. Lack of efficient support system	.....
11. High Bureaucracy	.....
12. Lack of Property Rights	.....
13. Lack of Credit	.....
14. High Cost of Borrowing	.....
15. High Inflation Rate	.....
16. High Devaluation	.....
17. Lack of Contract Enforcement	.....
18. Unskilled Labor	.....
19. High Cost of Inputs	.....
20 Lack of Efficient Technology	.....
21. Lack of Trust and Honesty	.....
22. Others (specify)	.....

Appendix 5.4

VARIABLE DEFINITIONS AND MEASUREMENTS

Growth Measures

Employment Growth: is the log ratio of number of employees in year 2004 to that of year 2001. Number of employees includes the owner/manager and part-time employees.

Sales Growth: is the log ratio of sales in year 2004 to sales in year 2001. Sales figures are deflated into year 2001 prices using inflation rates published by the Bank of Ghana for the respective years.

Age of firm: The number of years between start year and year 2004.

Number of Owners: the number of shareholders or partners.

Age of the Owner: The owner/manager's age in years as at 2004.

Education: A dummy variable. One if owner/manager has a university education or equivalent, zero if otherwise.

Nationality: A dummy variable, 0 for immigrants and 1 for Ghanaians.

Percentage Holding: The percentage ownership held by the owner/manager.

Firm size: The number of employees at year 2000. Number of employees includes the owner/manager and part-time employees.

Growth Intentions

Employment Growth Intention: Ordinal variable indicating a firm's employment growth intention for the period 2001- 2004. Five categories (1) no growth, (2) growth rate between 1-10% (3) 11-20% (4) 21-50% and (5) above 51%.

Sales Growth Intention: Ordinal variable indicating a firm's sales growth intention for the period 2001- 2004. Five categories (1) no growth, (2) growth rate between 1-10% (3) 11-20% (4) 21-50% and (5) above 51%.

Importance of Employment Growth: 5 point scale measuring the importance of growth in employment.

Importance of Sales Growth: 5 point scale measuring the importance of growth in sales.

Importance of Assets Growth: 5 point scale measuring the importance of growth in assets.

Importance of Profit Growth: 5 point scale measuring the importance of growth in profit.

Owner/Manager's Experience: Dummy variable. One if the owner/manager has experience in related business, zero if otherwise.

Owner/Manager's Years of Experience: Owner/manager's experience in related business in years.

Owner/Manager's Managerial Experience: Dummy variable. One if owner/manager has previous managerial experience, otherwise 0.

Local Experience: Dummy variable. One if owner/manager has previous local managerial experience, zero if otherwise.

Other Business: Dummy variable. One if the owner/manager has other business interest, zero if otherwise.

Sector: Five dummy variables, for sectors within which a firm operates. The metal sector is used as the base.

Marketing Expense: The average annual percentage of turnover spent on marketing activities.

Sales Staff: The average number of staff engaged in marketing activities.

Export: A dummy variable, one if a firm is engaged in export activities zero if otherwise.

Export Sales: The average annual percentage of sales accounted for by export.

Product Innovation: Five point scale measuring the frequency at which new products are introduced for the period 2001-2004.

Product Improvement: Five point scale measuring the frequency at which significant improvements are made to existing products for the period 2001-2004.

Process Innovation: Five point scale measuring the level of significant improvement made in the production process for the period 2001-2004.

Business Planning

Business Plan: A dummy variable, one if a firm has a written business plan, zero if otherwise.

Annual Budget: A dummy variable, one if a firm prepares annual budget, zero if otherwise.

Owner/manager's Involvement: Five point scale measuring the extent of involvement of the owner/manager in the day to day operations of the firm.

Employees' Training

External Training: Five point scale measuring the frequency at which employees are engaged in eternal training programmes.

Internal Training: Five point scale measuring the frequency at which employees are engaged in an in-house on the job training.

Appendix 6.1: Regression Equation 1 (Multiple Regression)

	Standardized Coefficients
Owners' Characteristics	
Growth Orientation	0.362**
Prior Industry Experience	0.301**
Local Experience	(0.185)**
Firm Characteristics	
Firm Size	(0.484)**
Sector- Plastics	(0.106)*
Business Strategy	
Business Planning	0.184**
Marketing Expenses	0.243**
Export	0.168**
Constraints	
Informal Competition	(0.146)**
Late Payments	0.139**
Constant	0.223
No. of Cases	122
Adjusted R Squared	0.681
F-Ratio	26.878

*Note: * and ** imply coefficients are statistically significant at 5 percent and 1 percent respectively.*

Appendix 6.2: Multiple Regression Equation 2

	Standardized Coefficients
Owners' Characteristics	
Growth Orientation	0.304 **
Prior Industry Experience	0.254**
Local Experience	(0.163) *
Education	0.043
Family Background	0.072
Nationality	(0.017)
Other Business	(.023)
Firm Characteristics	
Firm Size	(0.424)**
Sector- Plastics	(0.152)*
Sector- Furniture & Wood Processing	(0.004)
Sector- Food Processing	(0.097)
Sector- Printing	(0.016)
Firm Age	(0.081)
No. of Owners	(0.059)
Business Strategy	
Business Plan	0.185**
Marketing	0.248 **
Export	0.124*
Product Innovation	0.041
Product Improvement	0.000
Process Innovation	0.072
Informal Training	0.007
Constraints	
Informal Competition	(0.148)*
Late Payments	0.170*
Constant	(0.225)
No. of Cases	122
Adjusted R Squared	0.68
F-Ratio	12.209

*Note: * and ** imply coefficients are statistically significant at 5 percent and 1 percent respectively.*

Appendix 6.3: Relative Contribution of Variables to the Explanatory Power

	Multiple Regression Adj. R-Square Change	Multiple Regression Cumulative Adj. R-Square	Single Regression Adj. R-Square
Employment Growth Anticipated	0.382	0.382	0.382
Firm Size	0.066	0.448	0.164
Business Plan	0.107	0.555	0.137
Prior Industry Experience	0.03	0.585	0.109
Marketing	0.035	0.62	0.087
Informal Competition	0.025	0.645	0.063
Product Improvement	-0.003	0.642	0.027
Local Experience	0.011	0.653	0.008
Informal Training	0.019	0.672	0.017
Process Innovation	0.013	0.685	0.114
Late Payments	0.01	0.695	-0.004
Sector - Food Processing	0.004	0.699	-0.005
Nationality	0.002	0.701	-0.007
Education	-0.001	0.7	0.095
Sector – Plastics	-0.001	0.699	-0.007
Enterp. Family Background	0	0.699	0.031
Firm Age	-0.001	0.698	0.058
Product Innovation	-0.001	0.697	0.022
Sector – Printing	-0.002	0.695	-0.002
Sector – Furniture	-0.003	0.692	-0.006
No. of Owners	-0.003	0.689	0.061
Export	-0.003	0.686	-0.001
Other Business	-0.005	0.681	.084
Constant			
No. of Cases	122		
R Square Adjusted	0.681		
F-Ratio	12.209		

Appendix 6.4: Single Regression Equation

	Standardized Coefficients	R Square	Adjusted
Owners Characteristics			
Employment Growth Anticipated	0.622**	0.382	
Owner/Manager Exp. Related Firm	0.342**	0.109	
Local Experience	0.128	0.008	
Education	0.321**	0.095	
Enterp. Family Background	0.198*	0.031	
Nationality	(0.041)	(0.007)	
Other Business	(.303)	0.001	
Firm Characteristics			
Firm Size	(0.413)**	0.164	
Sector- Plastics	0.043	0.007	
Sector- Furniture	(0.052)	0.006	
Sector- Food Processing	0.057	0.005	
Sector- Printing	(0.078)	0.002	
Age	(0.256)**	0.058	

No. of Owners	(0.262)**
0.061	
Business Strategy	
Business Plan	0.379**
0.137	
Marketing	0.308**
0.087	
Export	0.086
0.001	
Product Innovation	0.175
0.022	
Product Improvement	0.188*
0.027	
Process Innovation	0.348**
0.114	
Informal Training	0.158
0.017	
Constraints	
Informal Competition	(0.266) **
0.063	
Late Payments	0.063
0.004	

*Note: * statistical significant at 5 percent and ** 1 percent.*

Appendix 6.5: Reduced Form Equation- Owner/Manager Characteristics

	Standardized Coefficients
Employment Growth Anticipated	0.514**
Prior Industry Experience	0.158*
Local Experience	0.019
Education	0.171*
Family Background	0.068
Nationality	0.092
Other Business	(0.098)
Constant	(0.280)
No. of Cases	122
R Squared Adjusted	0.439
F-Ratio	14.503

*Note: * and ** imply coefficients are statistically significant at 5 percent and 1 percent respectively.*

Appendix 6.6: Reduced Form Equation-Firm Characteristics

	Standardized Coefficients
Firm Size	(0.334)**
Sector- Plastics	(0.047)
Sector- Furniture	(0.114)
Sector- Food Processing	(0.004)
Sector- Printing	(0.139)
Age	(0.108)
No. of Owners	(0.230)**
Constant	0.708
No. of Cases	122
R Squared Adjusted	0.198
F-Ratio	5.27

*Note: * and ** imply coefficients are statistically significant at 5 percent and 1 percent respectively.*

Appendix 6.7: Reduced Form Equation - Business Strategy

	Standardized Coefficients
Business Plan	0.269**
Marketing	0.226 **
Export	(0.112)
New Product Addition	0.072
Product Improvement	(0.054)
Process Improvement	0.299**
Informal Training	0.014
Constant	(0.331)
No. of Cases	122
R Squared Adjusted	0.226
F-Ratio	6.04

*Note: ** and * imply coefficients are statistically significant at 5 percent and 1 percent respectively.*

Appendix 6.8: List of Variables Used For Multivariate Analysis

Dependent Variables

1. Log of employment Growth
2. Log of Sales Growth (Inflation Adj.)

Independent Variables

Owner/Manager Characteristics

1. Owner's Age
2. Owners with Education University
3. Owner's Nationality
4. Other Family Shareholders
5. Family Shareholders
6. Non-Family Shareholders
7. Shareholding of owner/manager
8. Growth in Employment Anticipated
9. Growth in Sales Anticipated
10. Importance of sales growth
11. Importance of employment growth
12. Importance of assets growth
13. Importance of profit growth
14. Owner/manager experience related firm
15. Owner/manager years of experience
16. Owner with managerial experience
17. Owner/manager with local experience
18. Ownership Acquired through Acquisition
19. Ownership Acquired through Inheritance
20. Ownership Acquired through Starting
21. Ownership of other business
22. Family Enterp. Employment
23. Independence factor for self employment
24. Meeting challenge factor for self employment
25. Desire for experience
26. Opportunity
27. Personal Achievement
28. Making Money
29. Lack of Employment
30. Job Dissatisfaction
31. Redundancy

Firm Characteristics

1. Firm Age
2. No. of owners
3. Firm Size based on employees
4. Furniture & Wood Processing
5. Metal
6. Food Processing
7. Paper & Printing
8. Plastics & Rubber

Business Strategy

1. Marketing Expense
2. Engage in Export
3. Percentage of Revenue Export
4. Export Region
5. Product Innovation
6. Product Improvement
7. Process Innovation
8. Importance of Product Innovation
9. Importance of Low Cost Products
10. Importance of Large Scale Production
11. Importance of Niche Market
12. Importance of High Quality Product
13. Importance of Distribution Networks
14. Written Business Plan
15. Other Senior Managers Involvement in management
16. External training
17. External resource person
18. Internal training

Appendix 6.8 continued: List of Variables Used For Multivariate Analysis

Constraints

1. Impact of Corruption
2. Impact of Late Payments
3. Impact of Political Persecution
4. Impact of Transparency
5. Impact from Informal Competition
6. Competition from Imports
7. Lack of Demand
8. High & Inefficient Tax System
9. Inefficient Legal System
10. Inefficient Support System
11. High Bureaucracy
12. Property Right
13. Lack of Credit
14. Cost of Borrowing
15. High Rate of Inflation
16. High Rate of Devaluation
17. Contract Enforcement
18. Unskilled Labor
19. High Cost of Inputs
20. Inefficient Technology
21. Lack of Trust and Honesty

Appendix 6.9a: Growth Constraints by Firm Growth Categories

High Growers	Mean Scores	Growers	Mean Scores
Cost of Borrowing	4.26	Cost of Borrowing	3.56
High Cost of Inputs	3.67	High Cost of Inputs	3.42
Competition- Imports	3.67	Lack of Trust & Honesty	3.36
Lack of Trust & Honesty	3.59	Lack of Credit	3.26
Late Payments	3.59	Competition- Imports	3.24
Lack of Credit	3.48	Late Payments	3.10
High & Inefficient Tax	3.41	High & Inefficient Tax	2.84
Inefficient Support System	3.37	High Bureaucracy	2.74
High Bureaucracy	3.26	High Rate of Devaluation	2.74
High Rate of Inflation	3.04	High Rate of Inflation	2.66
High Rate of Devaluation	2.74	Inefficient Support System	2.58
Unskilled Labour	2.59	Unskilled Labour	2.56
Inefficient Technology	2.56	Informal Competition	2.38
Informal Competition	2.52	Inefficient Technology	2.34
Lack of Demand	2.44	Lack of Demand	2.18
Corruption	2.15	Corruption	2.08
Transparency	1.96	Transparency	1.82
Inefficient Legal System	1.85	Contract Enforcement	1.68
Property Right	1.63	Property Right	1.66
Contract Enforcement	1.52	Inefficient Legal System	1.64
Political Persecution	1.22	Political Persecution	1.18
Average Mean Score	**2.79**	**Average Mean Score**	**2.52**

Appendix 6.9b: Growth Constraints by Growth Categories

Stable Firms	Mean Scores	Decliners	Mean Scores
Cost of Borrowing	4.1	Cost of Borrowing	4.37
Lack of Trust & Honesty	3.7	Inefficient Support System	3.74
High Cost of Inputs	3.6	Lack of Trust & Honesty	3.69
High & Inefficient Tax	3.5	High & Inefficient Tax	3.63
Inefficient Support System	3.4	High Cost of Inputs	3.60
Lack of Credit	3.2	Lack of Credit	3.40
High Rate of Inflation	3.2	High Rate of Inflation	3.31
Unskilled Labour	3.1	Competition- Imports	3.26
Informal Competition	3.0	Unskilled Labour	3.17
Competition- Imports	2.9	Corruption	3.03
Late Payments	2.9	Informal Competition	3.00
High Rate of Devaluation	2.9	High Rate of Devaluation	2.77
Corruption	2.7	Inefficient Technology	2.63
High Bureaucracy	2.6	Transparency	2.49
Inefficient Technology	2.6	Late Payments	2.46
Lack of Demand	2.2	High Bureaucracy	2.34
Transparency	2.0	Lack of Demand	2.06
Property Right	1.9	Inefficient Legal System	1.57
Inefficient Legal System	1.7	Property Right	1.49
Contract Enforcement	1.4	Contract Enforcement	1.29
Political Persecution	1.1	Political Persecution	1.17
Average Mean Score	**2.75**	**Average Mean Score**	**2.78**

Appendix 6.10a: Growth Constraints by Sector

Furniture & Wood Processing	Mean Score	Metal	Mean Score	Food Processing	Mea Sco
Cost of Borrowing	3.86	Cost of Borrowing	3.68	Cost of Borrowing	4.18
High Cost of Inputs	3.59	Impact of Late Payments	3.64	Lack of Trust & Honesty	3.79
Lack of Trust & Honesty	3.50	High Cost of Inputs	3.52	High Bureaucracy	3.50
High Bureaucracy	3.41	High Bureaucracy	3.44	Lack of Credit	3.46
Lack of Credit	3.32	Inefficient Support System	3.28	Impact of Late Payments	3.43
Inefficient Support System	3.09	Competition from Imports	3.24	Inefficient Support System	3.43
Inefficient Technology	2.91	High Rate of Inflation	3.24	High Cost of Inputs	3.39
Impact of Corruption	2.91	Informal Competition	3.12	Competition from Imports	3.32
Informal Competition	2.73	Lack of Credit	3.04	Inefficient Technology	2.89
High & Inefficient Tax System	2.64	Lack of Trust & Honesty	2.96	High & Inefficient Tax System	2.61
Unskilled Labour	2.45	High Rate of Devaluation	2.8	High Rate of Inflation	2.61
Transparency	2.32	High & Inefficient Tax System	2.64	Informal Competition	2.54
High Rate of Inflation	2.23	Impact of Corruption	2.24	High Rate of Devaluation	2.32
Impact of Late Payments	2.09	Lack of Demand	2.24	Unskilled Labour	2.18
Competition from Imports	1.95	Inefficient Technology	2.12	Impact of Corruption	2.11
High Rate of Devaluation	1.82	Impact of Transparency	2.08	Inefficient Legal System	2.11
Lack of Demand	1.68	Unskilled Labour	2.00	Property Right	2.04
Property Right	1.64	Contract Enforcement	1.36	Lack of Demand	1.93
Inefficient Legal System	1.27	Property Right	1.20	Contract Enforcement	1.71
Contract Enforcement	1.27	Impact of Political Persecution	1.12	Transparency	1.11
Political Persecution	1.05	Inefficient Legal System	1.08	Political Persecution	1.11
Average Mean Score	**2.46**	**Average Mean Score**	**2.57**	**Average Mean Score**	**2.66**

Appendix 6. 10b: Growth Constraints by Sector

Paper & Printing	Mean Score	Plastics	Mean Score
Cost of Borrowing	4.19	Cost of Borrowing	4.00
High Cost of Inputs	3.65	Impact of Late Payments	3.95
Impact of Late Payments	3.54	Lack of Trust and Honesty	3.90
High & Inefficient Tax System	3.50	Competition from Imports	3.76
Lack of Credit	3.42	High Cost of Inputs	3.71
Informal Competition	3.38	High & Inefficient Tax System	3.57
High Bureaucracy	3.31	Lack of Credit	3.52
Lack of Trust and Honesty	3.19	High Bureaucracy	3.33
Impact of Corruption	3.08	Inefficient Support System	3.19
Transparency	3.08	Unskilled Labour	3.00
High Rate of Inflation	2.88	High Rate of Inflation	2.90
Inefficient Technology	2.81	High Rate of Devaluation	2.90
Inefficient Support System	2.73	Lack of Demand	2.71
Competition from Imports	2.65	Inefficient Technology	2.57
High Rate of Devaluation	2.50	Impact of Corruption	2.48
Unskilled Labour	2.50	Informal Competition	2.38
Lack of Demand	2.50	Inefficient Legal System	2.05
Contract Enforcement	1.88	Contract Enforcement	1.86
Inefficient Legal System	1.58	Transparency	1.76
Property Right	1.31	Property Right	1.57
Political Persecution	1.27	Political Persecution	1.38
Average Mean Score	**2.81**	**Average Mean Score**	**2.88**

Appendix 6.11: Growth Constraints by Firm Size

Small Firms	Mean Score	Medium Firms	Mean Score	Large Firms	Me Sc
Cost of Borrowing	4.05	Cost of Borrowing	3.87	Cost of Borrowing	4.1
High Cost of Inputs	3.67	High Bureaucracy	3.70	High Bureaucracy	3.6
Lack of Credit	3.56	Lack of Trust & Honesty	3.57	High Cost of Inputs	3.5
Late Payments	3.51	High Cost of Inputs	3.46	Late Payments	3.4
Lack of Trust & Honesty	3.38	Lack of Credit	3.17	Lack of Trust & Honesty	3.4
Inefficient Support System	3.36	Late Payments	3.09	Impact of Corruption	3.3
High Rate of Inflation	3.15	High & Inefficient Tax System	3.09	Lack of Credit	3.1
Competition from Imports	3.09	Inefficient Support System	2.98	High & Inefficient Tax System	3.1
High Bureaucracy	3.07	Competition from Imports	2.89	Inefficient Support System	2.9
Informal Competition	2.85	Informal Competition	2.80	Competition from Imports	2.9
High & Inefficient Tax System	2.80	Inefficient Technology	2.76	Informal Competition	2.9
Inefficient Technology	2.69	High Rate of Inflation	2.57	Unskilled Labour	2.6
High Rate of Devaluation	2.62	Impact of Corruption	2.52	Inefficient Technology	2.3
Unskilled Labour	2.31	Unskilled Labour	2.41	Impact of Transparency	2.3
Lack of Demand	2.31	High Rate of Devaluation	2.37	High Rate of Inflation	2.2
Impact of Corruption	2.27	Lack of Demand	2.28	High Rate of Devaluation	2.2
Impact of Transparency	2.00	Impact of Transparency	1.98	Contract Enforcement	2.1
Inefficient Legal System	1.53	Property Right	1.65	Inefficient Legal System	1.9
Contract Enforcement	1.47	Inefficient Legal System	1.61	Property Right	1.8
Property Right	1.36	Contract Enforcement	1.59	Lack of Demand	1.7
Political Persecution	1.16	Political Persecution	1.13	Political Persecution	1.3
Average Mean Score	**2.68**	**Average Mean Score**	**2.64**	**Average Mean Score**	**2.7**

Appendix 6.12: Business Strategy and Constraints (Correlation coefficient)

	Marketing	Export	Prod. Inn	Proc. Inn	Plan	Training
Cost of Borrowing	.143	-.013	-.198*	-.176	.036	-.197*
High Cost of Inputs	.083	-.176	.119	.110	-.207*	.061
Lack of Credit	.105	-.234**	-.052	-.102	-.263**	-.182*
Support System	.000	-.126	.020	-.089	-.246**	-.006
Imports	.286**	.071	.103	-.048	.100	.123
Informal Comp.	.032	-.219*	-.162	-.226*	-.189*	.068
High Inflation Rate	-081	-.255**	.144	.011	.042	.048
Technology	-.052	-.171	-.163	-.161	-.259**	-.098
Unskilled Labor	.055	-.015	.122	.201*	-.129	.234**
Lack of Demand	.013	-.091	.108	.056	-.189*	.086

*p=.05, ** p=.01

Appendix 6.13: Firm Characteristics and Constraints (Correlation coefficient)

	Age	Ownership	Size	Wood	Metal	Food	Paper	Plasts
Cost of Borrowing	.022	.192*	-.007	-.136	-.124	.133	.080	.036
High Bureaucracy	.085	.148	.210*	.020	-.011	.061	-.053	-.019
Lack of Credit	-.074	.070	-.154	-.028	-.129	.067	.010	.081
Late Payments	.056	.150	-.065	-.396**	.086	.019	.068	.216
Support System	-.086	.253**	-.182*	-.038	.075	.138	-.191*	.012
Imports	.051	.106	.074	-.324**	.080	.141	-.152	.252
High Tax	.062	-.169	.088	-.136	-.141	-.168	.234**	.222
Informal Compet.	-.008	.018	.051	-.049	.116	-.124	.214*	-.168
High Inflation Rate	-.119	-.127	-.338**	-.220*	.206*	-.087	.054	.042
Technology	-.147	.008	-.108	.127	-.259**	.104	.073	-.047
Devaluation Rate	.052	-.038	-.090	-.319**	.182*	-.053	.043	.142
Unskilled Labor	.058	-.143	.110	.012	-.213*	-.106	.061	.267
Lack of Demand	.028	-.152	-.105	-.226*	.016	-.128	.139	.205
Transparency	.172	-.090	.071	.096	.022	-.339**	.420**	-.132

*p=.05, ** p=.01

Appendix 6.14: Owner/Manager Characteristics and Constraints (Correlation coefficient)

	Growth Int.	Prior Industry	Local Exp	Edu.	Family	Nationality	Other Busi.
Cost of Borrowing	-.178*	.089	.057	-.109	-.016	.184*	.243**
Lack of Credit	-.159	.060	.079	.042	.1	.206*	.139
Support System	-.069	.058	.037	.108	-.006	.183*	.031
Imports	-.027	.103	.210*	-.053	-.220*	-.046	.226*
Informal Compet.	-.144	-.022	.022	.200*	-.132	-.034	.167
High Inflation Rate	.017	.088	.140	-.106	.025	.237**	-.079

*p=.05, ** p=.01

Appendix 8.1: The Impact of Growth Variables on Sub-Sectors

Variable	Wood Processing	Metal	Food Processing	Paper & Printing	Plastics & Rubber	Our Overall Findings
Owners Characteristics						
Educational Level	Low	Low	High	Low	High	High level of education is associated with high growth.
Nationality	Mixed	High level of Locals	High level of Locals	High level of Locals	High level of immigrants	High immigrant concentration is associated with high growth.
Firm Characteristics						
Firm Age	Medium	Medium	Young	Young	Old	Younger firms grow faster.
Business Strategy						
Marketing	Low	Medium	High	Medium	Medium	High marketing is associated with high growth.
Export	High	Medium	Low	Low	High	High export is associated with high growth.
Product Innovation	High	Medium	Low	Low	High	High product innovation is associated with high growth.

Appendix 8.2: Summary Findings- Sector

	Our Findings	Existing Findings LDCs	Existing Findings DCs	**Comments**
(1) Growth rates differed among sub-sectors.	Confirmed	Mixed	Mixed	The metal works experienced the highest growth, while the plastics and rubber was the least growth sub-sector.
(2) Certain owner/manager characteristics variables are associated with certain sub-sectors.	Confirmed		Mixed	The educational levels of the owner/managers were found to be high among food processing and plastics and rubber firms. It was low among wood processing, metal works and paper and printing sub-sectors. Prior industry experience, local experience, other business ownership, and entrepreneurial family background had no varied significant impacts on the sub-sectors.
(3) High immigrants' concentration in certain sub-sectors.	Confirmed	Confirmed	Confirmed	There was a high immigrants' concentration in the plastics and rubber and the wood processing sub-sectors. High level of immigrants' concentration leads to high growth in sales.
(4) The age distribution of firms varied among the sub-sectors.	Confirmed			The food processing and the paper and printing sub-sectors had a high level of younger firms that impacted positively on the sectors growth rates. Many of the firms in plastics were rather old.
(5) Firms within different sub-sectors had different business strategies to achieve growth.	Confirmed			Firms engaged wood processing were the least marketing oriented, while the food processing firms were the highest marketing oriented. Food processing and paper and printing firms were the least export and process innovation oriented, while wood processing and plastics and rubber firms were the highest exporters and process innovators.

Appendix 8.3: Impact of Growth Variables on Firm Size

Variable	Small Firms	Medium Firms	Large Firms	Comments
Owners Characteristics				
Growth Intention	High	Medium	Low	Higher growth aspiration led to higher growth. Smaller firms were more likely to be owned by younger owner/managers who were more growth oriented.
Nationality	Highly Local	Mixed	Mixed	There was a positive relationship between growth and immigrants businesses. Immigrants started firms on a larger scale.
Firm Characteristics				
Firm Age	Young	Medium	Old	Younger firms needed time and resources to develop in size.
Business Strategy				
Marketing	Low	Average	High	Small firms were more constrained by resources, faced a higher import and informal competition. The small firms had adopted niche marketing strategy and had more direct contacts in developing business.
Export	Low	High	High	Small firms had fewer resources, know how and a small production capacity.
Product Innovation	Low	Low	High	Small firms were constrained by resources.

Appendix 8.4: Summary Findings- Firm Size

	Our Findings	Existing Findings LDCs	Existing Findings DCs	**Comments**
(1) Relationship between firm size and growth.	Negative	Mixed	Mixed	The smaller firms grew faster and had a high growth orientation. The characteristics of small firms affecting growth were: (a) Predominately made up of local owner/managers with limited resources. (b) Had a low marketing orientation (c) Less involved in export (d) Had fewer resources to undertake product innovations.

Appendix 8.5: Summary Findings- Firm Age

	Our Findings	Existing Findings LDCs	Existing Findings DCs	**Comments**
(1) Relationship between firm age and growth.	Negative	Mixed	Mixed	There were no significant differences in (1) the owner/manager characteristics and firm age. (2) the business strategies adopted by the firms. (3) the perceived impacts of constraints on growth. The younger firms were smaller.

Appendix 9.1: Analysis of Exporters and High Growers

Variable	Exporters	High Growers	Comments
Growth Intention	High	High	The exporters had larger demand and production capacity. They were more positive about the business environment within the sub-region. They were less affected by the local business difficulties.
Prior Industry Experience	High	High	Owner/managers who had industry experience were more confident in venturing the export market. Others set up their firms purposely to export but not to compete with their previous employers in the local market.
Education	High	High	Higher education led to higher level of confidence, ability and know how in the export business. Language barrier was reduced.
Nationality	Immigrants	Immigrants	Less constrained by resources. Had a high level network. More likely to be in products with sub-regional export potentials.
Firm Size	Large	Small	The large firms had the capacity to supply the high export demand. Small firms were constrained by resources and know how.
Sector	Plastics	Metal	Both sub-sectors had high export potentials. The plastics sub-sector faced with a higher import competition locally had been more aggressive in the sub-regional market.

Appendix 9.1 Continued: Analysis of Exporters and High Growers

Variable	Exporters	High Growers	Comments
Firm Age	Old	Young	The learning theory was more applicable to the exporters. Older firms had the resources and experience to move externally.
Product Innovation	High	Medium	The export market was relatively more competitive. Firms needed to be more innovative to be successful. Exporters had more resources to engage in more innovative activities.
Process Innovation	High	Medium	Most exporters sold through agents who ensured that quality standards were maintained. Exporters were under pressure to change production process to meet the high export standards and cost efficiency.
Business Planning	High	High	The exporters were had more resources to engage experts. The exporters needed to meet the scheduled demands of their agents, thus requiring adequate planning. The high competitiveness in the export market forced firms to plan.
Marketing	Low	High	The exporters were less directly involved in marketing activities in the importing countries.

Appendix 9.2: Summary Findings- Export

	Our Findings	Existing Findings		Comments
		LDCs	DCs	
(1) Relationship between export and growth.	Positive	Mixed	Mixed	The Ghanaian economy is relatively small and less competitive. Firms that enter the export market are able to build long term competitiveness and enjoy continued growth. Export constraints are many in LDCs that hinder growth rate of exporters.
(2) Proportion of small firms that export.	Low	Low	Low	See Appendix 9.1 for reasons.
(3) Relationship between export and firm size.	Positive	Positive	Positive	Large firms have high capital intensity and expertise. Export requires certain minimum scale of operations and quality that often are not met by small firms.
(4) Relationship between export and firm age.	Positive	Mixed	Mixed	Firms within our data set entered the export market gradually due to high perceived political risk in the sub-region.
(5) Relationship between immigrants owned firms and export.	Positive	Mixed		Immigrant firms within out data set were less constrained by resources. Immigrants firms are reported to produce mainly for the domestic markets in LDCs.
(6) Relationship between export and sector.	Concentrated	Mixed	Spread	Exporters within our data set are concentrated in wood processing and metal works. In some LDCs exporters are spread across industries.

Appendix 9.3: Summary Findings- Product Innovation (PdI)

	Our Findings	Existing Findings		Comments
		LDCs	DCs	
(1) Relationship between PdI and growth.	Positive	Mixed	Mixed	From our data set PdI was constrained by: (1) Lack of resources. (2) High level of imitation. (3) Lack of expertise. (4) Lack of competitive business environment.
(2) Relationship between PdI and export.	Positive		Positive	The exporters within our data set had to be more PdI to be competitive in the export market.
(3) Relationship between PdI and human capital.	Positive		Positive	Within our data set owner/managers with high levels of prior industry and local experiences were more PdI oriented. Managerial experience had negative relationship with PdI.
(4) Relationship between PdI and constraints.	Neutral			The perceived severity of the constraint factors was not significant determining factor for the firms' level of PdI.

Appendix 9.4: ANOVA on Process Innovation

Variable	F-ratio	Sig.	Low Innovators	High Innovators	Comments
Owner/Manager Characteristics					
Other Business	7.292	.008	High	Low	High innovators do not spread resources.
Prior Industry Experience	4.413	.038	Low	High	People leave their previous employment aimed at setting a more efficient firm. This lead to high level of competitiveness and growth.
Education	5.836	.017	Low	High	Higher educated owner/managers had higher knowledge and resources.
Nationality	9.281	.003	Local	Immigrants	Immigrants had higher level of resources, large size firm, higher education, high technology and were more committed to growth.
Firm Characteristics					
Paper & Printing	4.304	.040	Many Firms	Few Firms	Made up of many smaller firms who lacked resources and knowledge. Virtually competing in the less competitive local market. High global technological changes can make the local firms less competitive in the future.
No. of Owners	10.498	.002	High	Low	High level of conflicts among owner/managers did not allow for development

P=.05

Appendix 9.4 Continued: ANOVA on Process Innovation

Variable	F-ratio	Sig.	Low Innovators	High Innovators	Comments
Business Strategy					
Export	11.1	.001	Low	High	Exporters had more resources, faced high competition.
Business Planning	13.939	.000	Low	High	Large firms. High resources to engage experts.
External Training	9.451	.003	Low	High	
Internal Training	5.751	.018	Low	High	

P=.05

Appendix 9.5 Summary Findings- Process Innovation (PrI)

	Our Findings	Existing Findings		Comments
		LDCs	DCs	
(1) Relationship between PrI and growth.	Positive	Mixed	Mixed	For factors limiting PrI see Table 9.10
(2) Relationship between PrI and export.	Positive	Mixed	Positive	See Appendix 9.3
(3) Relationship between PrI and foreign ownership.	Positive	Mixed		Foreign owner/managers had greater access to resources, knowledge and technology.
(4) Relationship between PrI and human capital.	Positive		Positive	See Appendix 9.3
(5) Sectoral relationship with PrI.	Varied	Varied		The furniture and wood processors had a highest PrI orientation due to high regulation.
(4) Relationship between PrI and constraints.	Neutral			See Appendix 9.3.

Appendix 9.6: ANOVA on Business Planning

Variable	F-ratio	Sig.	No Planning	Planning	Comments
Owner/Manager Characteristics					
Prior Industry Experience	17.336	.000	Low	High	High understanding of the industry leads to better planning.
Growth Intention	8.220	.005	Low	High	Planning allows for better growth rate anticipation. Planning serves as a motivation seeking higher growth rate.
Years of Experience	11.621	.001	Low	High	Increase confidence and knowledge about the industry.
Education	20.691	.000	Low	High	High level of education improves quality of planning.
Nationality	7.94	.006	Locals	Immigrants	Immigrants had more resources in terms of financial and knowledge. They were more committed to growth.
Firm Characteristics					
Size	6.356	.013	Small	Large	Small firms were more resource constrained.
Business Strategy					
Export	10.863	.001	Low	High	See Appendix 9.1
Marketing	9.117	.003	Low	High	
Large Scale Production	6.492	.012	Low	High	Planning firms are more likely to larger and need to plan their production schedules.
Process Innovation	8.505	.004	Low	High	
Niche Market	10.398	.002	Low	High	

P=0.05

Appendix 9.7: Summary Findings-Planning

	Our Findings	Existing Findings		Comments
		LDCs	DCs	
(1) Relationship between planning and growth.	Positive	Mixed	Mixed	
(2) Proportion of firms that undertake planning.	Small	Small	Small	See Table 9.14
(3) Relationship between planning and human capital.	Positive	Mixed	Positive	Prior industry, managerial and years of experience had positive correlation with planning. Education is positively associated with planning.

Appendix 10.1: Summary of Constraints

	Mean Score	Level of Effect on Growth		Comment
		LDCs	DCs	
Cost of Borrowing	3.99	High	Low	Cost of funds remain high in many LDCs. Ghana has witnessed declining rate since 2000 but remains high.
High Cost of Inputs	3.57	High	Low	LDCs firms rely on inputs from the DCs at higher cost. No capital to extract natural resources in LDCs by LDCs firms, thus rely on DCs at a higher price.
Lack of Trust & Honesty	3.46	High	Low	Lack of rules and regulations and law enforcement affect trust which increases transaction cost in LDCs. Limits resource availability and networking.
High Bureaucracy	3.4	High	Low	Large portion of business transactions in LDCs are controlled by the state thus increasing effect of bureaucracy. Bureaucracy also affects delayed payments, credit, support, tax etc.
Lack of Credit	3.35	High	Low	There has been a recent increase of funds from DCs to LDCs. However no effective way of lending to small firms exist in many LDCs.
Late Payments	3.34	High	Medium	Largely state related in Ghana. Lack of contract enforcement reinforces behavior in private sectors in LDCs. Laws exist in DCs to regulate state institutions payment behaviors.
Inefficient Support System	3.15	High	Low	With unequal access to resources and application of regulations in LDCs support for the small firms is an important factor for growth. Smaller firms require more support.
Competition- Imports	2.99	High	High	The trade linearization policy being pursued by many LDCs is affecting growth. LDCs firms don't have the resources to withstand those from DCs and middle income countries.

Appendix 10.1 Continued: Summary of Constraints

	Mean Score	Level of Effect on Growth		Comment
High & Inefficient Tax	2.98	High	Low	Many LDCs had not structured the system to be efficient and effective. Tax inefficiency encourages informal business. Corruption and bureaucracy increase the level of tax inefficiency. Firms that use imported raw materials suffer more.
Informal Competition	2.84	High	Low	Informal activities are high in many LDCs, which is reinforced by corruption, inefficient tax administration, lack of rules and regulations. The effect is high among wood processing and metals works in Ghana.
Inflation Rate	2.78	High	Low	Inflation reduces local competitiveness. It used to be very high in Ghana; it has seen reduction since 2000.
Inefficient Technology	2.66	High	Low	Lack of resources, expertise and knowledge are the main causes in LDCs. Trade liberalization and increase in availability of information through the internet are reducing the problem.
Corruption	2.55	High	Low	The increase in democratic rules and pressure from donor countries are having some but little impact on the level of corruption in many LDCs. Corruption perception in Ghana is on the increase from other recent researches.
Devaluation Rate	2.47	Medium	Low	Firms in LDCs mainly imports capital goods and raw materials. Ghana experienced very high devaluation between 1997-1998.
Unskilled Labor	2.40	High	Low	The educational system in Ghana has failed to train middle level technical manpower.
Lack of Demand	2.20	Medium	Low	Low purchasing power exists in many LDCs. LDCs with high population have high markets and experiencing growth in firms.

Appendix 10.1 Continued: Summary of Constraints

	Mean Score	Level of Effect on Growth		Comment
Transparency	2.06	High	Low	Many firms and government agencies operate less transparent in LDCs. No specific laws exist to compel firms for full disclosures in Ghana.
Inefficient Legal System	1.62	High	Low	Reduces trust and increase transaction cost. Other researchers had found impact to be highly severe in LDCs.
Contract Enforcement	1.62	High	Low	As Above.
Property Right	1.56	High	Low	Ghana had previously suffered from seizure of private assets. Current constitution guarantees private property. High administration bottlenecks exist in title registration.
Political Persecution	1.18	Medium	Low	Politics is used to cripple opponents business or foster that of close associates in many LDCs.